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FOREIGN TECHNOLOGY DIVISION

HANDBOOK OF CLIMATE OF THE USSR

HUMIDITY OF AIR, ATMOSPHERIC PRECIPITATIONS, SNOW COVER

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PARTIALLY EDITED MACHINE TRANSLATION

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HANDBOOK OF CLIMATE OF THE USSR
HUMIDITY OF AIR, ATMOSPHERIC PRECIPITATIONS, SNOW COVER

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Meteorological data;
Tables data;
Weather stations.
Russian translations.
(RDB)

U. S. BOARD ON GEOGRAPHIC NAMES TRANSLITERATION SYSTEM

Block	Italic	Transliteration	Block	Italic	Transliteration
А а	*А а*	A, a	Р р	*Р р*	R, r
Б б	*Б б*	B, b	С с	*С с*	S, s
В в	*В в*	V, v	Т т	*Т т*	T, t
Г г	*Г г*	G, g	У у	*У у*	U, u
Д д	*Д д*	D, d	Ф ф	*Ф ф*	F, f
Е е	*Е е*	Ye, ye; E, e*	Х х	*Х х*	Kh, kh
Ж ж	*Ж ж*	Zh, zh	Ц ц	*Ц ц*	Ts, ts
З з	*З з*	Z, z	Ч ч	*Ч ч*	Ch, ch
И и	*И и*	I, i	Ш ш	*Ш ш*	Sh, sh
Й й	*Й й*	Y, y	Щ щ	*Щ щ*	Shch, shch
К к	*К к*	K, k	Ъ ъ	*Ъ ъ*	"
Л л	*Л л*	L, l	Ы ы	*Ы ы*	Y, y
М м	*М м*	M, m	Ь ь	*Ь ь*	'
Н н	*Н н*	N, n	Э э	*Э э*	E, e
О о	*О о*	O, o	Ю ю	*Ю ю*	Yu, yu
П п	*П п*	P, p	Я я	*Я я*	Ya, ya

*ye initially, after vowels, and after ъ, ь; e elsewhere.
When written as ё in Russian, transliterate as yё or ё.

RUSSIAN AND ENGLISH TRIGONOMETRIC FUNCTIONS

Russian	English	Russian	English	Russian	English
sin	sin	sh	sinh	arc sh	$\sinh^{-1}$
cos	cos	ch	cosh	arc ch	$\cosh^{-1}$
tg	tan	th	tanh	arc th	$\tanh^{-1}$
ctg	cot	cth	coth	arc cth	$\coth^{-1}$
sec	sec	sch	sech	arc sch	sech^{-1}
cosec	csc	csch	csch	arc csch	csch^{-1}

Russian	English
rot	curl
lg	log

GRAPHICS DISCLAIMER

All figures, graphics, tables, equations, etc. merged into this translation were extracted from the best quality copy available.

Page 1.

HANDBOOK ON CLIMATE OF THE USSR.

HUMIDITY OF AIR, ATMOSPHERIC PRECIPITATIONS, SNOW COVER.

Pages 2-4.

No Typing.

Page 5.

PREFACE.

"Handbook on climate of USSR" consists of 34 issues, comprised by administrations of hydrometeorological service for single program and procedure, developed of Main Geophysical Observatory im. A. I. Voyeykov and by affirmed editorial board of GUGMS [ГУГМС - Main Administration of Hydrometeorological Service] with Council of Ministers of USSR under chairmanship of corresponding member of AS USSR M. I. Budyko.

Each issue of "Handbook on climate of USSR" consists of five parts, which contain characteristics of separate climatic elements: Part I - solar radiation, radiation balance and sunshine, part II - temperature of air and soil, part III - wind, part IV - humidity of air, precipitation and snow cover and part V - cloudiness and atmospheric phenomena. Part IV consists of three sections: section 1 contains information on the humidity of air, section 2 - on atmospheric precipitations and section 3 - on snow cover.

Present issue 27 of "Handbook on climate of USSR" illuminates territory of Kamchatka district.

Handbook includes materials of observations of meteorological stations, which exist at present or acted earlier in territory of

region. In section 1 are placed the data of 52 stations, in section 2 - 62 stations and 30 posts, in section 3 - 59 stations.

Material is represented in essence on separate stations in the form of tables with explanatory text to each table or group of tables (similar employing procedure of treatment or according to representation in them of materials). In the Section 2 Table 4 is given in the generalized form for the territory of region, while in Tables 5 and 6 - data of several stations are united under the method of "hodostation".

In text part of each section is given short description of general laws governing conditions of element contained in it, whose knowledge is necessary for correct use of material.

In comparison with "Climatological handbook of USSR" issue 1950, this edition is supplemented by series of new tables, is increased network/grid of stations, including tables of probabilistic characteristics, whose results are obtained by appropriate statistical processing of long series of observations.

For obtaining climatic norms are used observations on humidity of air during period of 1936-1964, on precipitation - for the years 1891-1965 and snow cover - for the years 1892-1965.

Handbook is intended for wide circle of specialists. Data can be

used for the planning, design and operation in the field of agriculture, industry, transport, and also in the scientific research work.

Page 6.

"Handbook on climate of USSR", iss. 27 is prepared for press/printing by colleagues of division of climate of Petropavlovsk hydrometeorological observatory: division heads N. A. Gradyushko, A. P. Katsyk, engineers T. S. Gaydukevich, N. K. Seminoy with participation of station technician T. P. Koval'chuk, technicians S. K. Konevoy, S. D. Fedorovoy, Kh. A. Lukshevits and L. A. Abramova.

First section is prepared for press/printing under general manual by Cand. of physico-mathematical sciences A. P. Katsyk, who realized also critical editing of section; sections 2-3 - under general management head of division N. A. Gradyushko, editing was realized by N. A. Gradyushko with participation of director A. V. Lipovk's observatory.

Table 4 section 2 (precipitation) is comprised in Main Geophysical Observatory by Dr. of geographic sciences A. N. Lebedev.

Some characteristics are obtained by mechanized working/treatment, carried out by Novosibirsk branch GMTs.

Scientific methods management/manual in process of preparation of

handbook was realized in division of climatology of GGO Cand. of geographic sciences N. V. Smirnovoy, L. P. Kuznetsovoy, Ts. A. Shver, ass. scientific colleague V. I. Lipovskoy.

General scientific methods of management/manual belongs to candidate of geographic sciences V. V. Orlovoy.

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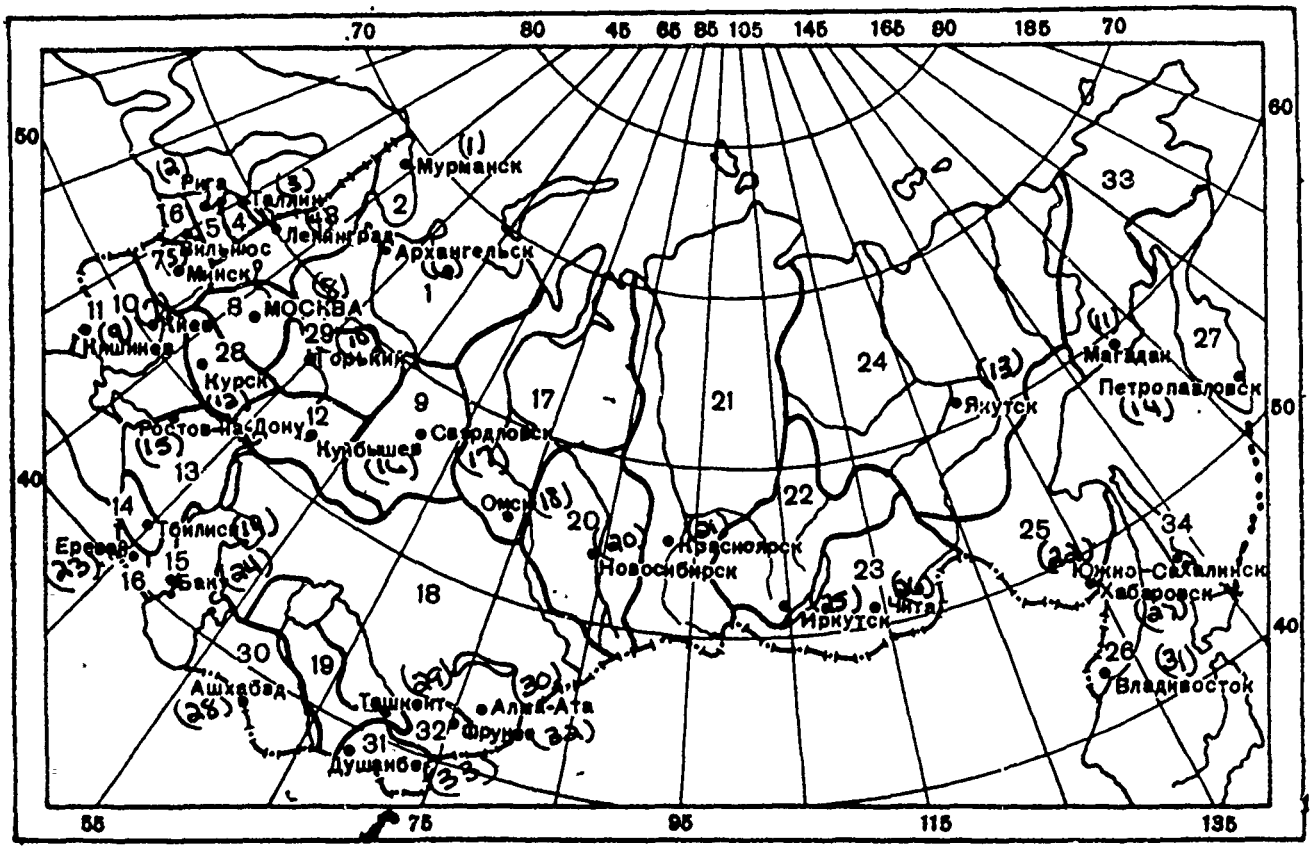

THE COMPOSITE CHART OF THE ISSUES OF "HANDBOOK ON CLIMATE OF THE USSR".

Key: (1). Murmansk. (2). Riga. (3). Tallin. (4). Leningrad. (5). Vil'nyus. (6). Arkhangel'sk. (7). Kiev. (8). MOSCOW. (9). Kishinev. (10). Gor'kiy. (11). Magadan. (12). Kursk. (13). Yakutsk. (14). Petropavlovsk. (15). Rostov-on-Don. (16). Kuybyshev. (17). Sverdlovsk. (18). Omsk. (19). Tbilisi. (20). Novosibirsk. (21). Krasnoyarsk. (22). Yuzhno Sakhalinsk. (23). Yerevan. (24). Baku. (25). Irkutsk. (26). Chita. (27). Khabarovsk. (28). Ashkhabad. (29). Tashkent. (30). Alma Ata. (31). Vladivostok. (32). Frunze. (33). Dushanbe.

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SHORT CHARACTERISTIC OF THE REGIME OF HUMIDIFICATION.

Kamchatka district occupies entire peninsula of Kamchatka with adjacent to it part of continent, and also Karaginskiy island and Komandorskiy. Region is elongated from the southwest to the northeast and differs in terms of the great variety of physicogeographical conditions.

Relief of region, is mountainous. Almost in the meridian direction on the peninsula were lengthened two ridges/spines: Median and eastern. Between them the valley region of Kamchatka, which is low, frequently is swampy plain with set of lakes is located.

Western coast is flat strongly clouded up lowland, which is weakly rugged in southern part and converts/transfers into hilly-ridgy plain in north.

East coast has many gulfs, bays.

Conditions of humidification are caused by proximity of large water spaces, special features of area relief and atmosphere circulation. Coasts and center section of Kamchatka are distinguished between themselves under the conditions of humidification; humidity is higher in the coasts. Are considerable also differences in the

conditions of the weather of windward and leeward slope. A climate of windward east and southeastern, and in the summer period also of western slopes is characterized by increased humidification.

On moisture receipt Kamchatka district relates to zone of sufficient humidification, and its southern part - to zone of excessive humidification. The greatest amount of precipitation falls in the area of geothermal sources in the south of peninsula (to 2500 mm per annum), and also on the southeast (1400-1600 mm). Least of all of precipitation in the year falls on the extreme north of region (280-300 mm). Just as widely changes along the territory the number of days with precipitation ≥0.1 mm. On the north of region, in the center of the valley region of Kamchatka the total number of days with precipitation is smallest (130 days). The greatest number of days with precipitation in the year is observed in the very southern part of the peninsula Kamchatka, also, on the Komandorskiye Islands (220 days).

High snow cover and its prolonged occurrence are characteristic for Kamchatka. Maximum depth of snow cover reaches during March-April and comprises in the coasts in average/mean 40-80 cm (but in separate years - 150-180 cm), in the center section of the peninsula to 100 cm even more. Highest snow cover (average/mean 150-160 cm) is observed in the mountain valleys of the central and southern part of the peninsula (Pushchino, Nachiki, Pauzhetskiye Klyuchi). In the snow winters depth of snow cover in these areas reaches 2.5 m and more. In

the northern areas of Kamchatka and on the slopes of median ridge/spine snow cover is retained to 200-240 days in the year, in the remaining territory - from 160 to 180 days. On the highest mountains and the volcanos of Kamchatka the snow lies/rests the year round.

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In entire territory of Kamchatka is observed high relative humidity of air, which little is changed during year, especially in coasts. In the center section of the peninsula in the summer time relative humidity sometimes has values of 30% and below.

Humidity of air.

Humidity of air - is one of elements of conditions of humidification, which has high value for many branches of national economy.

Water vapor is unstable atmospheric constituent, its content strongly is changed depending on physicogeographical conditions of terrain, time of year, circulation special features of atmosphere, surface condition of soil, etc. On the humidity of air in different parts of the territory it is possible to judge by the value of the vapor pressure, relative humidity of air, and also by a saturation deficit of air by water vapor.

Vapor pressure, which is contained in air as temperature of air,

in annual variation of smallest values reaches by winter: during January in central and northern areas and during February in coasts. The greatest values fall on July and August. The distribution of vapor pressure on the territory of region is analogous with the temperature of air: in winter lowest values are observed on the extreme north of region, in the mountains and center section of the peninsula (0.7-1.5 mb.). In the West coast (Fig. 1) the value of elasticity varies from 2 to 2.5 mb., on east - from 2 to 3 mb., while in the extreme south of peninsula it reaches the values of 40 mb. (Lopatka, cape during December). A noticeable increase in the vapor pressure is observed upon transfer of April to May by 1.5-2 mb. and of May to June by 2.5-3 mb. In summer (July, August) in the territory of elastic range of water vapor oscillates from 10 mb. on the extreme north of region to 13 mb. in the center section of the peninsula. In the coasts the values of elasticity attain 11-12 mb. (Fig. 2).

From August to September, in connection with sharp decrease in temperature of air, its moisture content also decreases in majority of areas of region by 2-3 mb., and in valley region of Kamchatka - by 4-5 mb.

Daily variation of vapor pressure is in winter expressed weakly. In some areas of region (north, the southeast, the southern tip of peninsula and the Komandorskiye Islands) it is absent, while in the rest elasticity change in the days does not exceed 0.5 mb. Its maximum values fit to 13 hours, minimum to 7 hours (according to the

observations in 1, 7, 13 and 19 hours). In summer (July, August) daily amplitude in the coastal areas does not exceed 1 mb., but at separate points, distant from the coast (Mil'kovo, Nachiki), it is 2.8 and 2.7 mb. respectively.

Relative humidity of air, which characterizes degree of saturation of air by water vapor, is changed during year over wide limits. There is greatest interest in the examination of the distribution of the relative humidity of air 13 hours, when its values are close to the minimum and evaporation is most intense.

In annual variation highest relative humidity of air 13 hours in areas with maritime climate is observed in summer, on West coast and Komandorskiye Islands - during July and August, in East coast - during June, July. In the central areas of the peninsula, where climate is continental, the greatest relative humidity of air is noted in winter - during December and January.

Page 10.

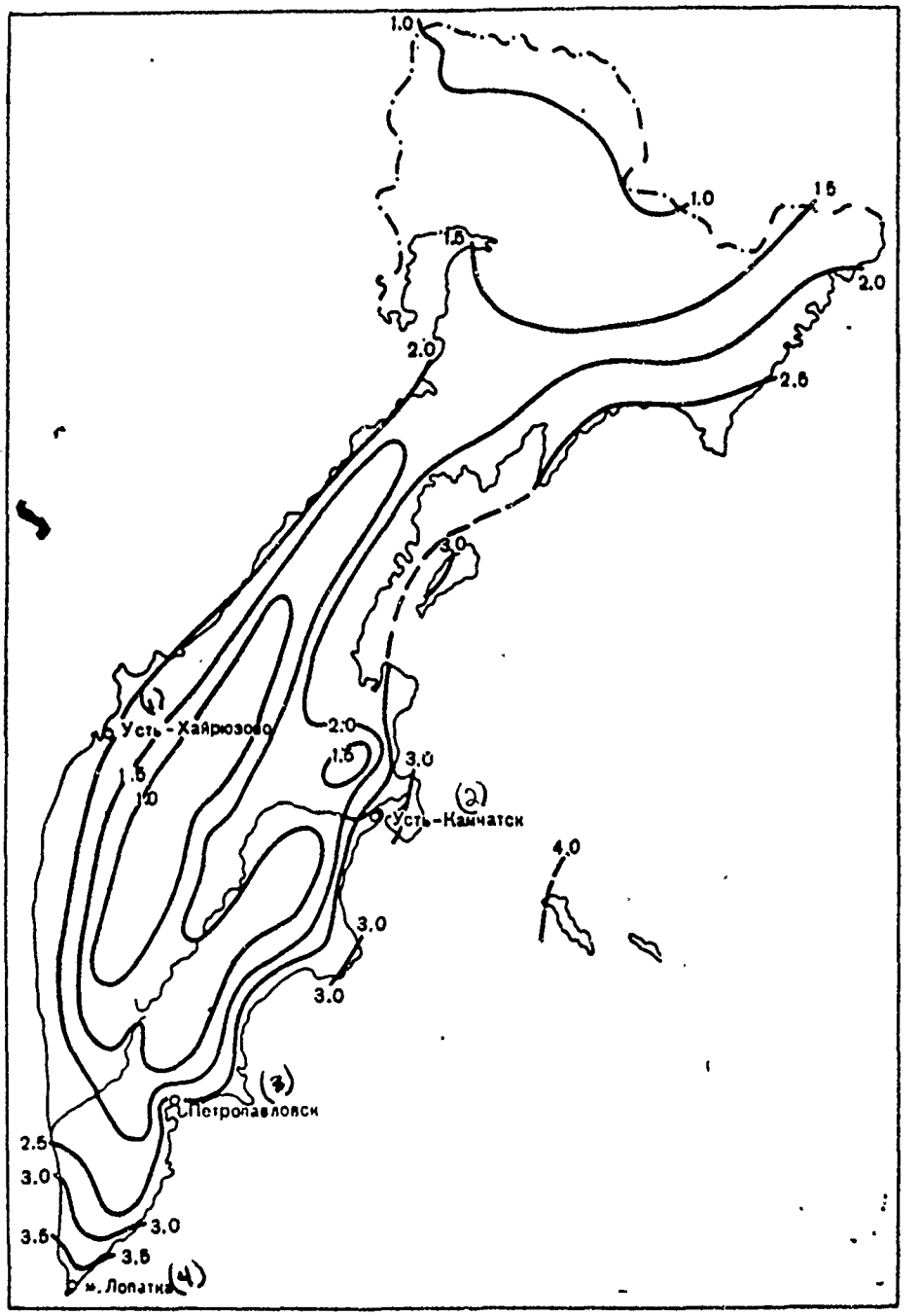

Fig. 1. Average/mean monthly vapor pressure (mb.). January.

Key: (1). Ust'-Khayryuzovo. (2). Ust'-Kamchatsk. (3). Petropavlovsk. (4). Lopatka.

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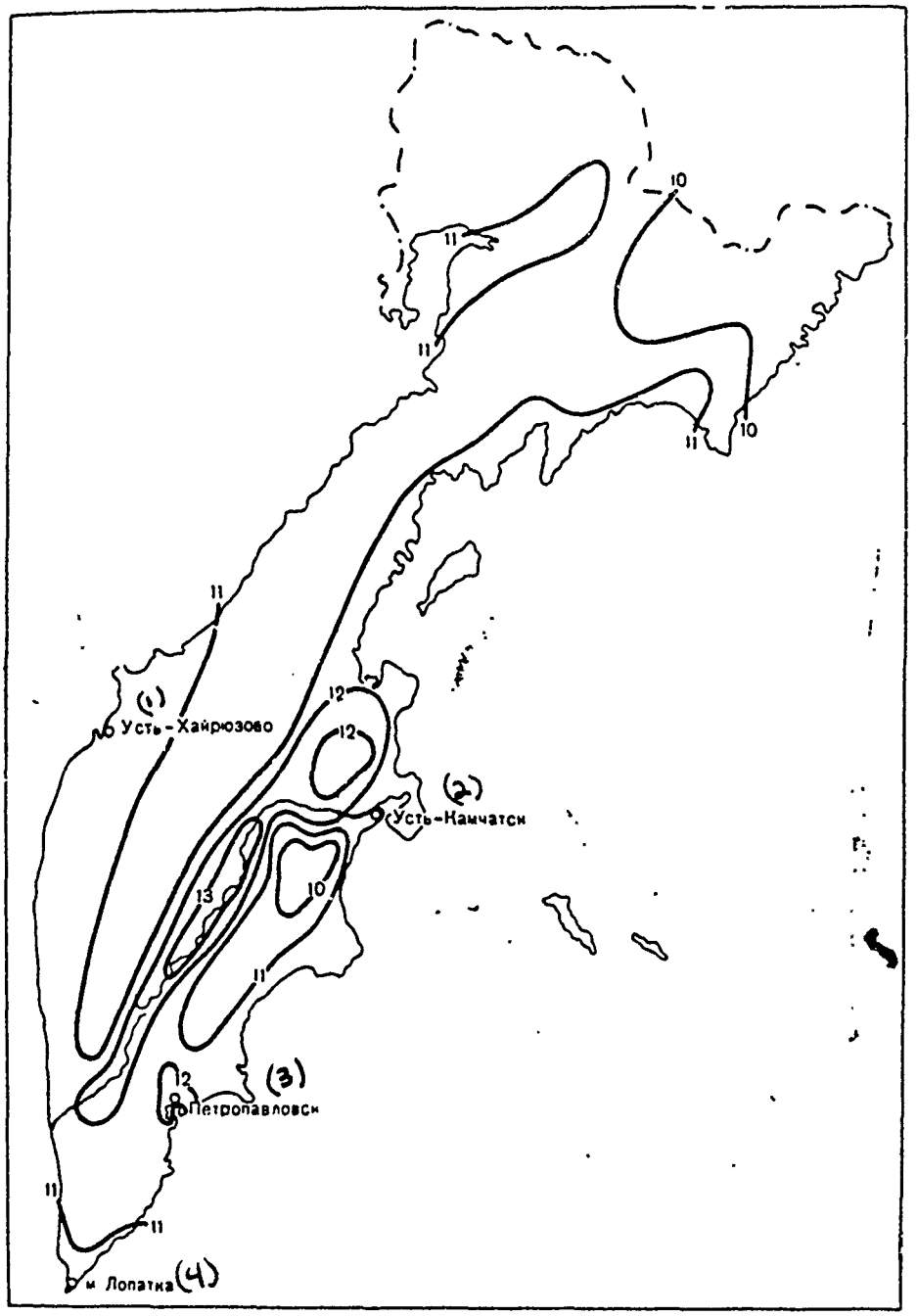

Fig. 2. Average/mean monthly elasticity of water vapor (mb.). July. Key: (1). Ust'-Khayryuzovo. (2). Ust'-Kamchatsk. (3). Petropavlovsk. (4). Lopatka.

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In the cold period of year relative humidity in the coasts is less

than in summer, but its lowest values fall to the spring and the autumn. In the continental areas the minimum humidity is observed during May - June (Table 1). In the warm period of year the relative humidity of air 13 hours of the smallest values reaches on the extreme north of territory and in the valley region of Kamchatka (55-65%). Relative humidity increases with advance to the south also on cape Lopatka reaches 95% (Fig. 3).

Change in average/mean monthly relative humidity of air from winter to summer on larger part of territory of region composes 20-30%. The same values achieve oscillations/vibrations in separate years in the coasts in winter, in the center section of the peninsula - in summer.

On possible values of humidity into different seasons of year it is possible to obtain representation from Table 6, where is led frequency of relative humidity 13 hours, calculated on the basis of mechanized developments.

In some points (Esso, Klyuchi, Mil'kovo, upper-Penjino) with average/mean relative humidity of air 13 hours, equal to 50-60%, during separate summer days humidity is reduced to 20% and less. The frequency of such values is small, approximately 0.2-1.4%. The humidity of less than 20% in the territory of region never was noted in the winter months. In contrast to this the relative humidity of air, equal to 100%, is possible in any month in all areas of region.

In summer its frequency in the continental areas is from 2 to 6%, in the coasts of the southern part of the peninsula to 60%, and on cape Lopatka - more than 80%.

Daily variation of relative humidity of air on larger part of territory is most sharply pronounced by summer, but is dissimilar in different areas of region (Fig. 4). It is absent on the Komandorskiye Islands during July: change in the course of twenty-four hours does not exceed 1-2%. In the valley region of Kamchatka the daily amplitude composes 35%, the smallest relative humidity of air is observed 15-16 hours, greatest - 3-5 hours; in the coasts the amplitude decreases to 15-20%, maximum falls to 12-15 hours, the minimum - for 2-4 hours. In winter daily variation of relative humidity virtually is absent: daily amplitude in the coast varies about 1-2%, and in the valley region of Kamchatka about 3-5% (Fig. 5).

Table 1. Average/mean monthly relative humidity of air in 1 and 13 hours (%).

(1) Станция	(2) Часы	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
(3) Усть-Большерецк	1	83	82	83	87	91	94	96	96	92	88	87	86
	13	81	79	78	81	82	86	90	89	82	79	83	84
(4) Петропавловск, маяк	1	78	75	75	78	84	91	91	90	88	77	76	79
	13	76	73	69	72	77	84	84	82	76	64	71	76
(5) Мильково	1	83	84	84	81	80	84	90	92	91	85	86	84
	13	80	72	58	52	48	49	61	61	55	53	72	81
(6) Эссо	1	83	83	84	82	83	87	92	93	91	86	85	84
	13	74	63	53	53	48	48	58	58	55	60	69	78
(7) Никольское (о. Беринга)	1	84	84	85	86	91	94	96	95	90	83	83	82
	13	82	81	82	83	82	85	90	88	82	76	80	81

Key: (1). Station. (2). hours. (3). Ust'-Bol'sheretsk. (4). Petropavlovsk, beacon. (5). Milkovo. (6). Esso. (7). Nicol (Is. Bering).

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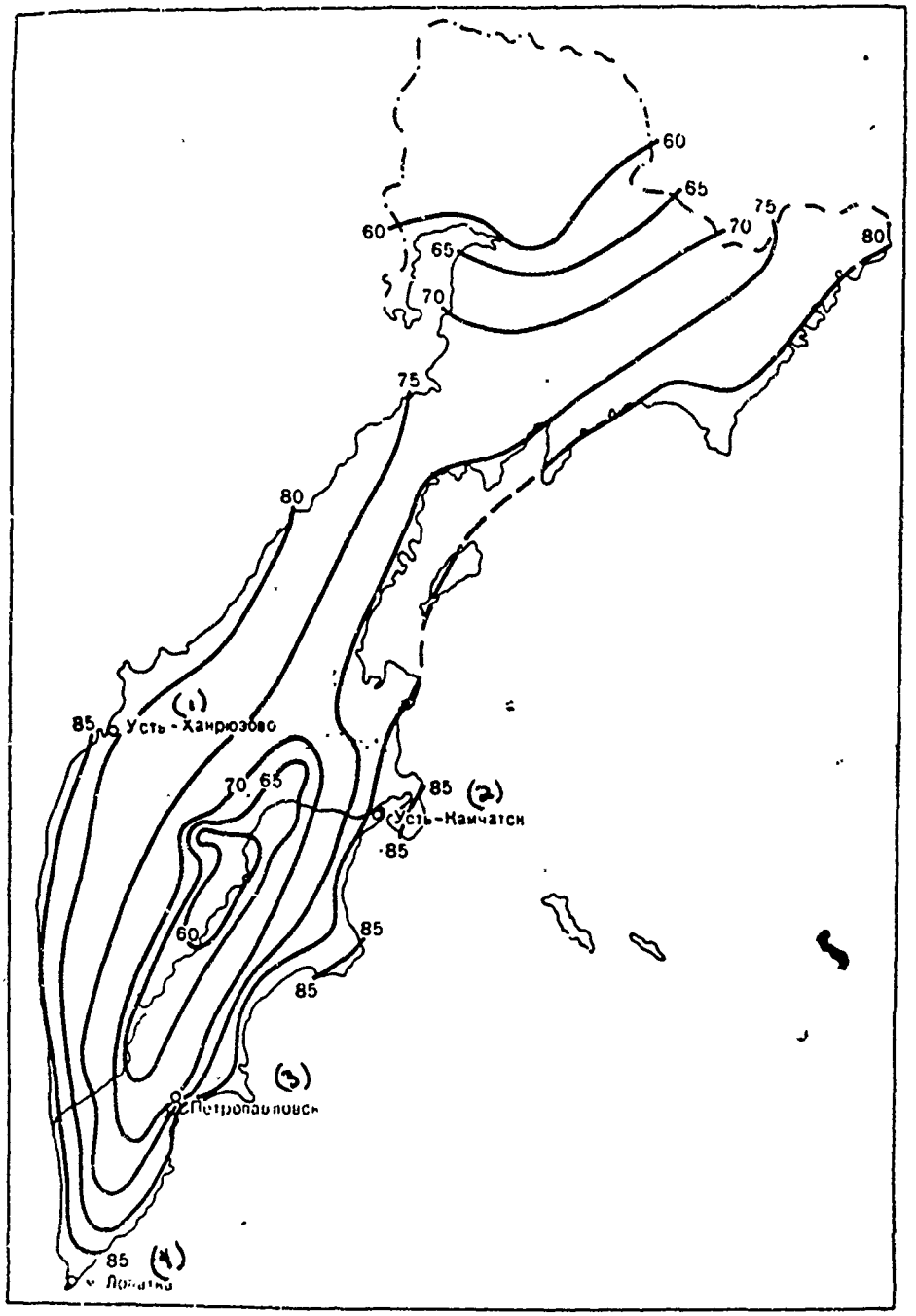

Fig. 3. Average/mean monthly relative humidity of air 13 hours (%). July.

Key: (1). Ust'-Khayryuzovo. (2). Ust'-Kamchatsk. (3). Petropavlovsk. (4). Lopatka.

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Number of days with relative humidity, equal and lower than 30%, i.e., number of dry days, on the average in year are changed territory from 0 to 18. On the West coast, the northeast of their peninsula is less than one, while in the extreme south of peninsula (cape Lopatka), on the islands of Komandorskiy and Karaginskij of such days in no way it is; in the southern part of the East coast of dry days is 1-2, but their maximum quantity is noted in the center section of the peninsula (to 18).

Days with humidity 30% and less under conditions of Kamchatka in majority of cases are observed with foehns (foehn is called warm dry air, which crosses mountains; in this case occurs increase in temperature of air on 1° during lowering to every 100 m, and considerable decrease in relative humidity of air).

In separate years number of dry days considerably exceeds average, in no way is in others of them. For example, in Esso with the average number of dry days 4.5 during June 1956 there were 15, but in 1953 were none at all.

Number of moist days with relative humidity in the daytime 80% and above in year reaches 276 in extreme south of peninsula and decreases to 60-90 on mainland part) (upper-Penjino region), also, in valley region of Kamchatka (Mil'kovo). The greatest number of moist days is noted in that period of the year, when is great the relative

humidity of air: in the coasts - in summer (July-August), in the continental areas of region - in winter (December).

Saturation deficit of air by water water vapor in territory of region has as relative humidity, maximum values in summer, minimum - in winter.

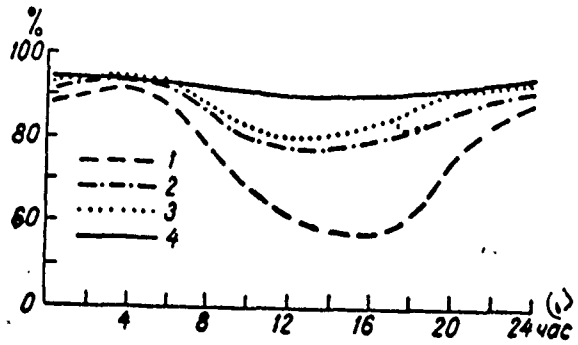

Fig. 4. Daily variation of relative humidity of air (%). July. 1 - Mil'kovo, 2 - Ust'-Khayryuzovo, 3 - Ust'-Kamchatsk, 4 - Nicol (Is. Bering).

Key: (1). Hour.

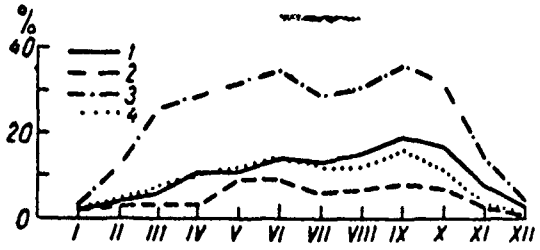

Fig. 5. Annual variation of daily amplitudes of relative humidity of air (%). 1 - Ust'-Kamchatsk, 2 - Nicol, 3 - Mil'kovo, 4 - Ust'-Khayryuzovo.

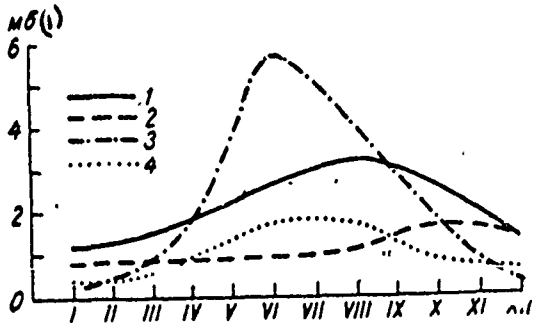

Fig. 6. Annual variation of average/mean monthly saturation deficit (mb.). 1 - Petropavlovsk, city, 2 - Nicol, 3 - Mil'kovo, 4 -

Ust'-Khayryuzovo.

Key: (1). mb.

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Exception is the extreme south of peninsula - cape Lopatka and the Komandorskiye Islands, where a saturation deficit in summer months has minimum values, and maximum falls on October. Demonstrative representation about a change in the values of a saturation deficit during the year gives the graph/curve of annual variation on several stations, located in different areas of region (Fig. 6).

Daily variation of saturation deficit is most clearly expressed in warm period of year: in coasts - from May through September, in continental areas - from April through October. During this period the greatest values of a saturation deficit (according to the observations into 1, 7, 13 and 19 hours) are noted 13 hours, smallest - 1 hour. The in winter daily variation of a saturation deficit barely is expressed; only 13 hours. Its weak increase in comparison with the data within the remaining periods is noted. In the transfer months (III, X) the smallest values of a saturation deficit are noted 7 hours, but these values are close to a saturation deficit 1 hour.

For purpose to describe at least approximately daily amplitude in different parts of territory in Table II are given differences in average/mean monthly sublimity of saturation deficit 13 hours. For and at 1 one in the morning. As can be seen from Table the II,

greatest values daily amplitude reaches in the valley region of Kamchatka and northern mainland part of the region during June - July approximately 8.3-8.5 mb. (Upper-Penjino, Mil'kovo). In the coasts the amplitudes are small, 2-3 mb., while on the extreme south of peninsula (cape Lopatka) and the Komandorskiye Islands - about 1 mb.

Atmospheric precipitations.

In territory during only year in question atmospheric precipitations are determined mainly by cyclonic activity. Precipitation, connected with the local circulation, even in summer comprise smaller portion. Both in summer and in winter most intense cyclonic activity, characteristic for the southeastern part of the peninsula, weakens to northwest. Respectively it changes on territory and quantity of atmospheric precipitations. The greatest amount of precipitation falls along the southeastern coast of Kamchatka. Great effect on the distribution of amount of precipitation exerts area relief. Amount of precipitation sharply increases on the slopes of the mountains, turned towards the moisture-bearing winds, and decreases on their lee side. Few precipitation falls in the center section of the valley region of Kamchatka, located between the median and eastern ridges/spines, which impede the penetration of moist air masses into the valley. The smallest amount of precipitation is observed on the north of the Koryakskiy district in the valley region of Penzhino.

Table II. Differences in the average monthly values of a saturation deficit at 1300 hrs. and at 0100 hrs.

(1) Станция	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
(2) Верхне-Пенжино	0.0	0.1	0.3	0.8	2.6	7.6	8.3	6.6	3.7	0.7	0.0	0.0
(3) Корф	0.1	0.1	0.2	0.5	1.1	1.9	2.6	2.8	2.5	0.9	0.2	0.0
(4) Усть-Хайрюзово	0.1	0.3	0.4	0.8	1.5	2.1	2.4	2.4	2.6	1.2	0.3	0.1
(5) Мильково	0.2	0.5	1.3	2.4	5.0	8.5	8.3	7.7	6.5	3.7	0.9	0.2
(6) Петропавловск, город	0.1	0.3	0.6	0.9	1.6	2.4	2.9	3.0	2.7	1.6	0.5	0.2
(7) Усть-Большерецк	0.1	0.2	0.4	0.5	0.8	0.9	0.9	1.1	1.6	1.0	0.4	0.1
(8) Лопатка, мыс	0.0	0.1	0.1	0.1	0.2	0.5	0.4	0.5	0.7	0.6	0.3	0.0

Key: (1). Station. (2). Upper-Penjino. (3). Korf. (4). Ust'-Khayryuzovo. (5). Mil'kovo. (6). Petropavlovsk, city. (7). Ust'-Bol'sheretsk. (8). Lopatka, cape.

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According to degree of humidification Kamchatskaya district relates to zone of sufficient humidification. In the extreme south, in the area of geothermal sources, and also on windward slope of the mountains of the southeastern coast of precipitation falls in an excessive quantity.

In territory in question amount of precipitation decreases in direction from southeast to northwest (from 1500-2500 to 280-350 mm). Greatest annual total precipitation (2500 mm per annum) is observed in the area of Pauzhetskie Klyuchi (Fig. 7). On the coast and the open capes of the southeast of peninsula falls also much precipitation in the year: from the southern point of Kamchatka to the area of bay Storozh the amount of precipitation in the year is equal to 1000-1500 mm; north, on capes Ozero, Africa and northeast Topata-Clyutorskiy

settlement quantity in the year is 850-900 mm.

In points of northeastern part) (Uka, Korf peninsula, located in bays, gulfs, shielded by mountains from moisture-bearing winds, amount of precipitation in year decreases to 500-650 mm. Much precipitation falls on Is. Medniy (st. Preobrazhenskiy), to 1200 mm per annum. In the valley region of Kamchatka the amount of precipitation in the year varies from 740 mm in Pushchino st. area to 320 mm in Sredne-Kamchastsk; to the northeast increases to 560 mm and more. In the southern part of the West coast precipitation falls from 750 to 1000 mm; to the north the amount of precipitation decreases and in Ust'-Lesa is 370 mm. Thus, in the territory of Kamchatka is observed extremely the nonuniform distribution of atmospheric precipitations.

Decrease of amount of precipitation from southern areas to north is connected with larger cyclone frequency above southern areas of peninsula both in summer and in winter. In cold half of year the cyclones from Japan areas approach Kamchatka and most frequently are moved along its East coast to the Aleutian islands. The mountain masses of East coast retard the speed of the motion of sufficiently moist air masses, which causes heavy precipitation on windward slope. As a result in the East coast drops out larger amount of precipitation, than in the low West coast. Western foothills and slopes of median ridge/spine with zonal circulation are in spring and in summer windward. Therefore near the mountains here in the sum in the year falls more precipitation than in the coast. For example, at

the post Shakhta, located nearer to the median ridge/spine, falls in the year precipitation 15% more than on coastal st. Kikhchik. In the small mountain valleys and in decreases in the relief of precipitation falls less than in the elevated sections.

Depending on form of atmospheric precipitations it is accepted to divide year into two periods: period of solid precipitation is considers cold period, and with predominance of liquid precipitations - warm. Cold period corresponds to the season from November through March, and warm period - from April through October. From the annual amount of precipitation for the cold period falls in the northern part of the West coast in average/mean 30%, to the warm - 70%. In the southern part of the West coast in the cold period precipitation falls approximately 48% of the annual sum, into the warm - 52%. In the East coast in its northern part during the cold period falls 40-45% of annual amount of precipitation, and in warm 55-60%. In the southeastern part of the region for the cold period falls about half of annual amount of precipitation (47-50%), warm 50-53%. In the center section of the peninsula during the cold period falls average/mean 40% of annual amount of precipitation, for warm - 60%.

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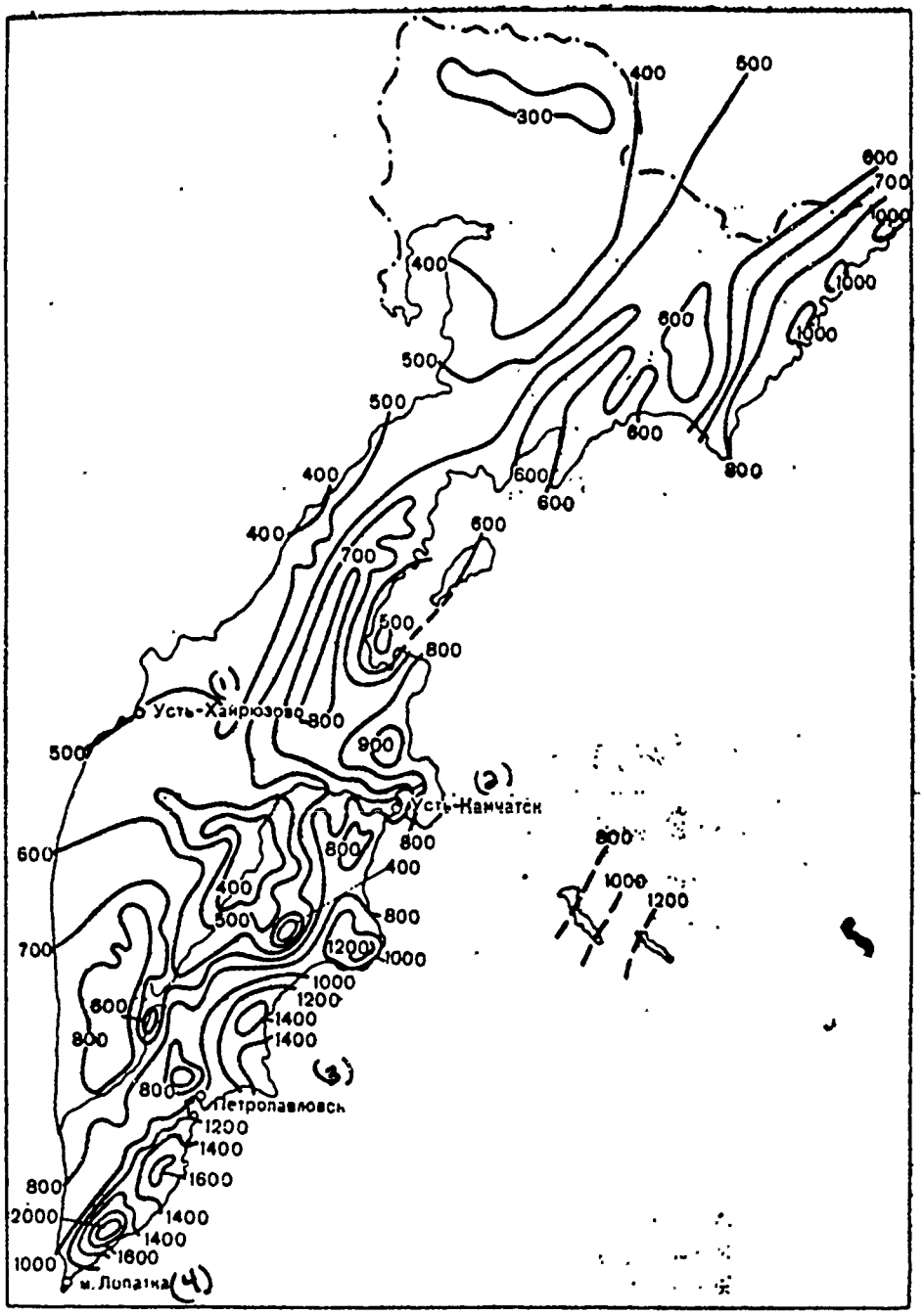

Fig. 7. Map/chart of amount of precipitation. Year.

Key: (1). Ust'-Khayryuzovo. (2). Ust'-Kamchatsk. (3). Petropavlovsk. (4). Lopatka.

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Special features of seasonal distribution of amount of precipitation are analogous to special features in distribution in territory of annual sums. Thus, during the cold period least of all of precipitation is noted on the north of region and in the northern part of the West coast to st. Ust'-Khayryuzovo (100-140 mm), and also in center section of valley region of Kamchatka (115-140 mm). In the West coast the amount of precipitation grows/rises from the north to the south. South of Ust'-Khayryuzovo amount of precipitation varies from 180 to 260 mm, while south of Ust-Bol'sheretsk - from 300 to 420 mm. In the East coast during the cold period falls 2-3 times more precipitation than on west. Due to the large brokenness of East coast and more complicated relief the amount of precipitation here changes intermittently in comparison with the West coast. As a whole in the East coast during the cold period amount of precipitation grows from the north to the south from 230-340 mm in its northern part to 490 mm in the area of Storozh bay. In the more southern areas the amount of precipitation is 600-700 mm. The greatest amount of precipitation during the cold period falls in the area of st. Pauzhetskiye Klyuchi, to 1210 mm.

In connection with the fact that precipitation in Kamchatka is connected predominantly with cyclonic activity, character of their precipitation in winter has its special features. First, for the winter is here characteristic of large variability of weather conditions, which is expressed, in particular, in the sudden snowfall

(charges). In the second place, precipitation is accompanied by high winds, which relates to one of the unfavorable special features of a climate of Kamchatka. Thirdly, precipitation falls unevenly. Sometimes in 24 hrs can fall to 100% and more monthly norm of precipitation. Thus, on 1 December, 1966, in Petropavlovsk fell 132 mm of precipitation, which composed 105% of many-year norm in December.

In summer in coasts precipitation have character of prolonged drizzling rains and, as a rule, are accompanied by temperature drop, caused by efflux of cold air masses from sea.

During warm period smallest amount of precipitation is observed in northern, mainland part of region (175-230 mm) and in center section of valley region of Kamchatka (200-250 mm). In the northern part of the West coast at this time of year falls 300-400 mm of precipitation, in south - 450 mm and more. In the northern part of the East coast during the warm period falls 280-400 mm of precipitation, south, to the area st. Storozh, bay 490-540 mm, and on the capes of the southeastern part of the coast 700-870 mm.

Change of precipitation in time and space in Kamchatka depends on special features of atmosphere circulation and temperature conditions of separate areas, relief, solar radiation and so forth, consequence of this is complicated annual variation of amount of precipitation, which is characterized by several maximums, is consequence of this. In the annual variation of sediments/residues on West coast are observed two maximums: in October-November and August.

Thus, at st. Ust'-Khayryuzovo (Fig. 8) during August falls the greatest amount of precipitation, and maximum during October is secondary. The minimum of precipitation in the West coast falls on February. In the separate years as the minimum, so also maximum of precipitation can be moved other months. For example, in Ust'-Khayryuzovo of 32 years of observations the principal maximum of precipitation falls on October in 34% of years, on August - in 28% of years, on July - in 22% and on September - in 16%. The minimum of precipitation in Ust'-Khayryuzovo most frequently (in 47% of years) is observed during February, but in separate years can fall on March (19%) and January (16%), it is less frequent - on April (3%) and May (6%), and also June (3%).

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Larger diversity in annual variation of precipitation in comparison with west (Petropavlovsk, beacon) is observed in East coast. Principal maximum of amount of precipitation here is noted in cold half of year, during October - November or December - January, which is explained output of deep southern cyclones, which bring with itself very moist maritime tropical air. Secondary maximum is observed during July or August. In winter (during March) on the southeast is observed also a considerable increase in the amount of precipitation, which is connected with the stimulation of cyclonic activity during this period of year. For such stations as Petropavlovsk, beacon (Fig. 8) maximum during March is secondary, and summer (during September) - by the third in the value. The smallest

amount of precipitation in the East coast is observed during April or June. In the northern part of this area (Apuka, Korf) in the annual variation of precipitation also there are several maximums. In the valley region of Kamchatka in the annual variation of precipitation principal maximum is observed in summer (during July or August), secondary - in winter (during December or January), the minimum - most frequently during April, less frequent - during February.

Average/mean annual amplitude of amount of precipitation (difference between maximum and minimum average/mean monthly sum) in valley region of Kamchatka and on north of region varies from 30 to 50 mm. The amplitude of precipitation is more in the coast. In the northern part of East coast is equal to 40-65 mm, in south to 75-100 mm (while in Petropavlovsk 120 mm). In the northern part of the West coast the average/mean annual amplitude of precipitation varies from 45 to 75 mm, in south - from 85 to 100 mm.

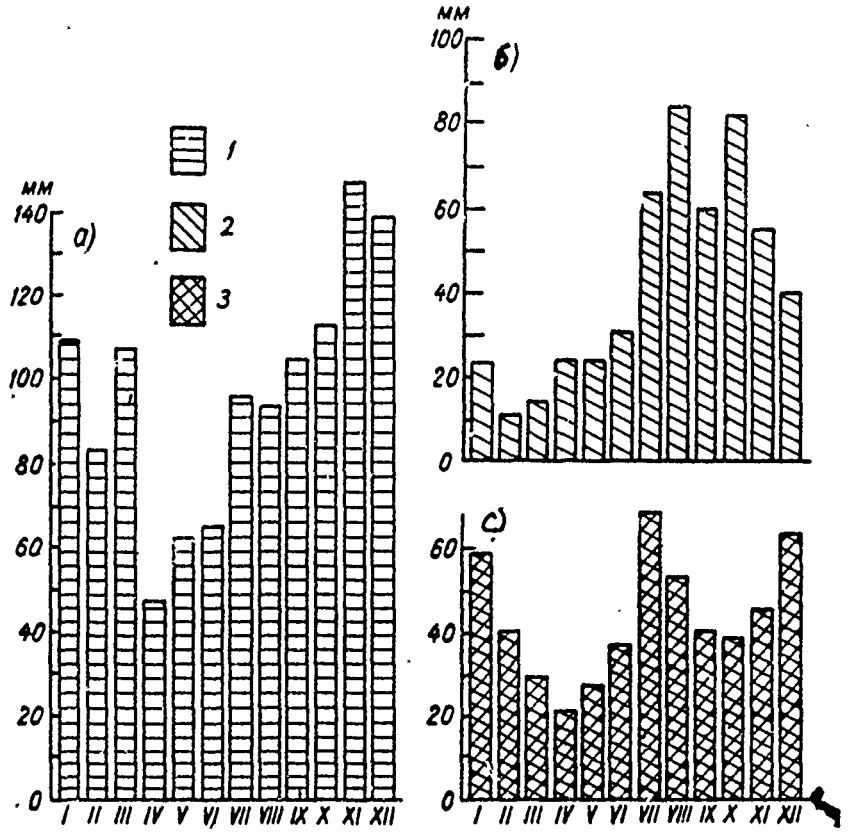

Fig. 8. Annual variation of precipitation. a). East coast, b). West coast, c). valley. 1 - Petropavlovsk, beacon, 2 - Ust'-Khayryuzovo, 3 - Mil'kovo.

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Change along territory of total precipitation in months of cold period is more than in months of warm. This is evident from Fig. 9 and 10, in which is represented the rainfall distribution during January and July.

Oscillation/vibration of monthly total precipitation from year to year is sufficiently great both into warm and in cold period. In the separate years monthly quantities of dropping out precipitation, depending on the conditions for atmosphere circulation, can considerably differ from many-year average/mean value. For example, in the West coast in Ust'-Bol'sheretsk during August 1940 fell out the precipitation, which compose 325% of monthly norm, and during August 1937 only 8%; in the East coast (st. Petropavlovsk, beacon) during December 1955 fell out 213% of monthly norm, and during December 1941 - only 7%; in the valley r. of Kamchatka (Milkovo station) during September 1949 it fell out 308% of monthly norm, and during September 1959 - only 22%.

In cold period years Kamchatka and its washing water in essence are found under the effect of aleutian low, into region of which is observed frequent entry of deep cyclones from areas of Pacific Ocean, adjacent to Japan, and it is less frequent - from west, through Sea of Okhotsk. Deep cyclones, which are displaced to the peninsula from the

south, imply much moisture; therefore amount of precipitation with their passage usually greatest.

Cyclonic activity above Kamchatka areas weakens in warm season. North Pacific Ocean pressure maximum is amplified, its ridge is spread far to the north and it has an effect on Kamchatka. The cyclones above the peninsula are displaced in essence in the latitudinal direction, sometimes - from the southwest to the northeast. The greatest amount of precipitation in the West coast of peninsula is connected with the cyclones, which emerge to Kamchatka from the west, and on east - with the cyclones, which are displaced from the south along the coast. Prolonged precipitation during this period are observed in the zone of low-mobility warm fronts.

With larger variability of precipitation from year to year total precipitation of different probability, or security are supplementary characteristic of average/mean monthly precipitation. Monthly and annual total precipitation of different security in the territory in question oscillate in the considerable limits. For example, during August (month with the greatest amount of precipitation and their large variability on the predominant part of the territory in the summer time) with the average/mean sum in the month from 40 to 100 mm, and on the southeast to 130 mm, in the separate years were observed monthly sums from 3-8 mm (1951, 1954) to 230-380 mm (1940, 1959), what is close in the first case to the amount of precipitation, which drop out in the desert, and the secondly - in the subtropics. However, the

probability of such extreme values is very low, larger it is partly less than 2%, that indicates repetition once a 50 years. On the August map/chart of monthly total precipitation by 10 and 90% of security (Fig. 11 and 12) it is evident that in the West coast in 90% of years are provided total precipitation 30-40 mm, in the East coast - from 20 mm in its northern part to 50 mm in south, in the valley r. of Kamchatka - 20 mm.

Total precipitation 90-170 mm are provided in 10% of years in West coast, while in Sobolyev st. area - more than 200 mm, in valley r. of Kamchatka 90-105 mm, in East coast 90-160 mm.

For some practical purposes form of precipitation and number of days with precipitation of different value has value. On the average in the year in the West coast 30-40% of all precipitation in the solid form drop out, 50-55% - in the liquid and 10-20% compose the mixed precipitation (wet snow, snow with rain, etc.).

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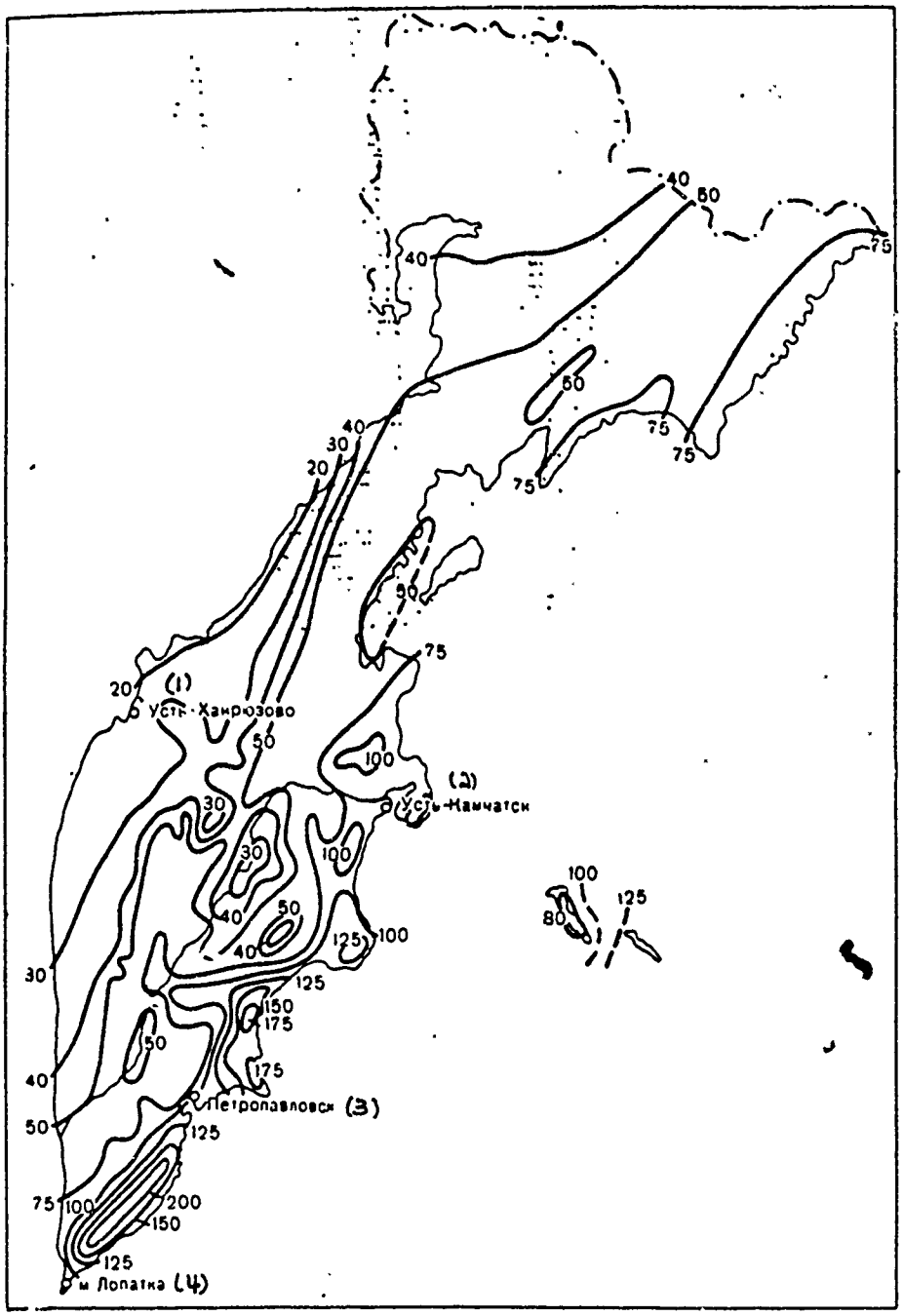

Fig. 9. Map/chart of amount of precipitation. January.

Key: (1). Ust'-Khayryuzovo. (2). Ust'-Kamchatsk. (3). Petropavlovsk. (4). Cape Lopatka.

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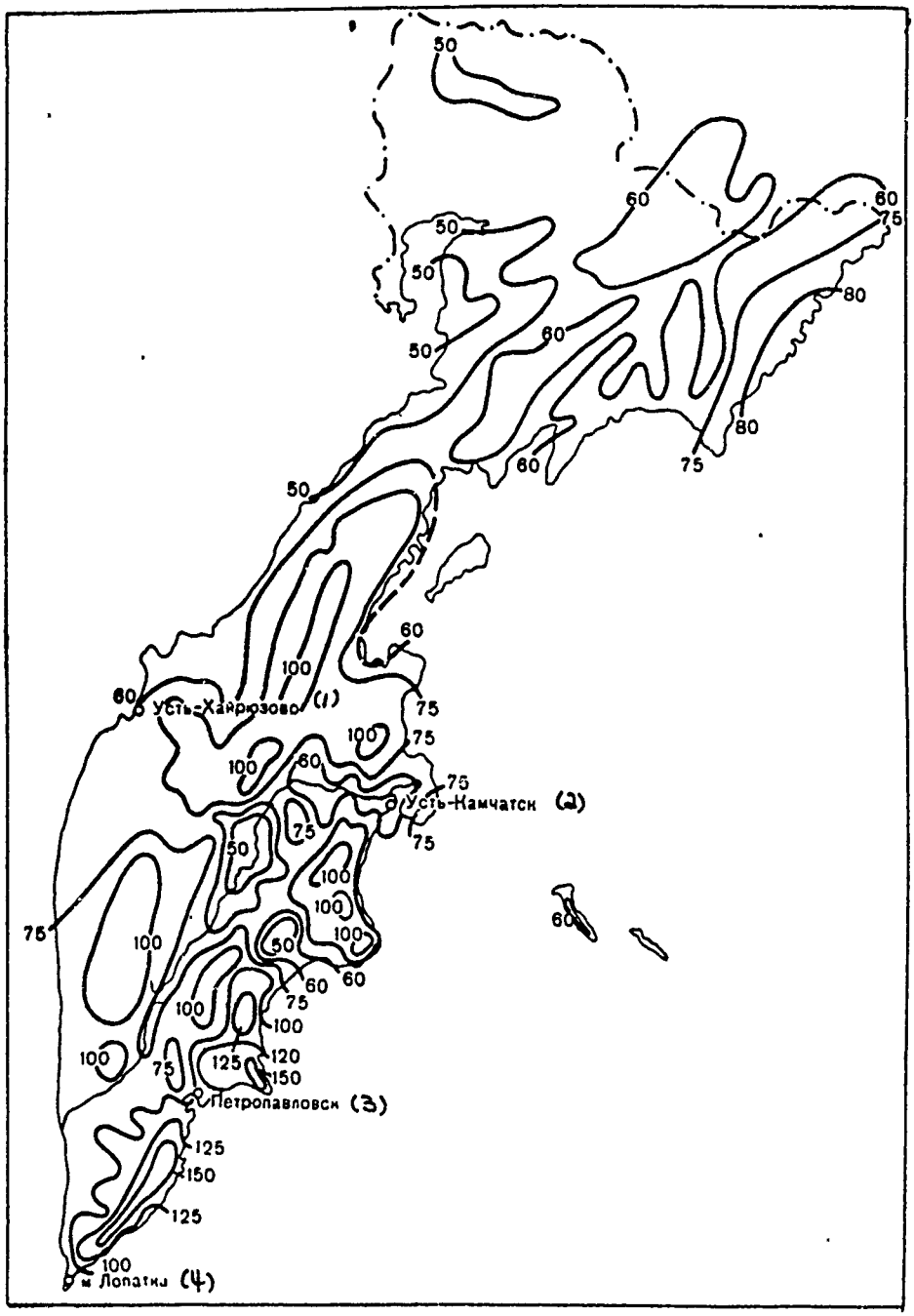

Fig. 10. Map/chart of amount of precipitation. July.

Key: (1). Ust'-Khayryuzovo. (2). Ust'-Kamchatsk. (3). Petropavlovsk. (4). m. Lopatka.

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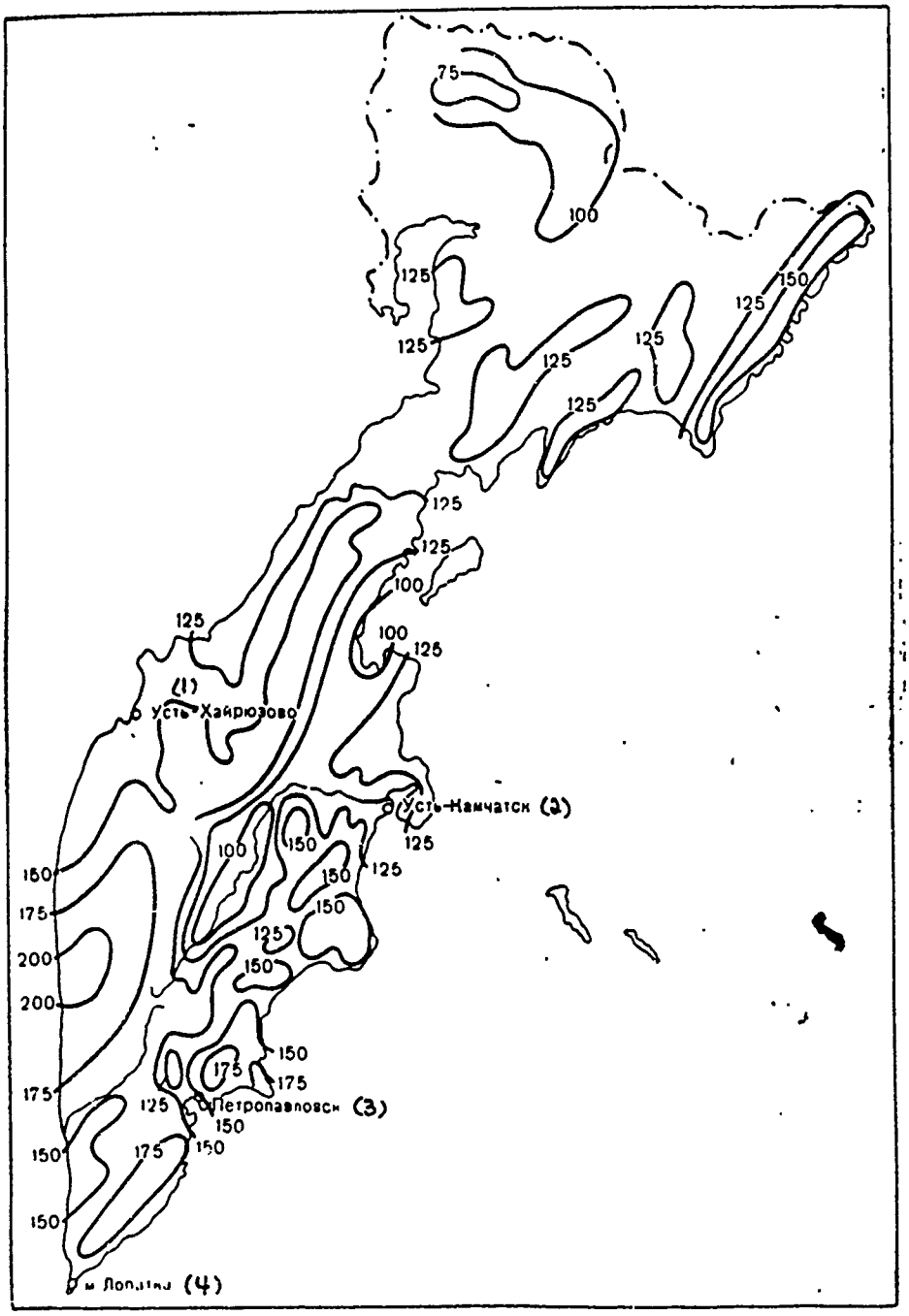

Fig. 11. Amount of precipitation in August by security with 10%.

Key: (1). Ust'-Khayryuzovo. (2). Ust'-Kamchatsk. (3). Petropavlovsk. (4). Cape Lopatka.

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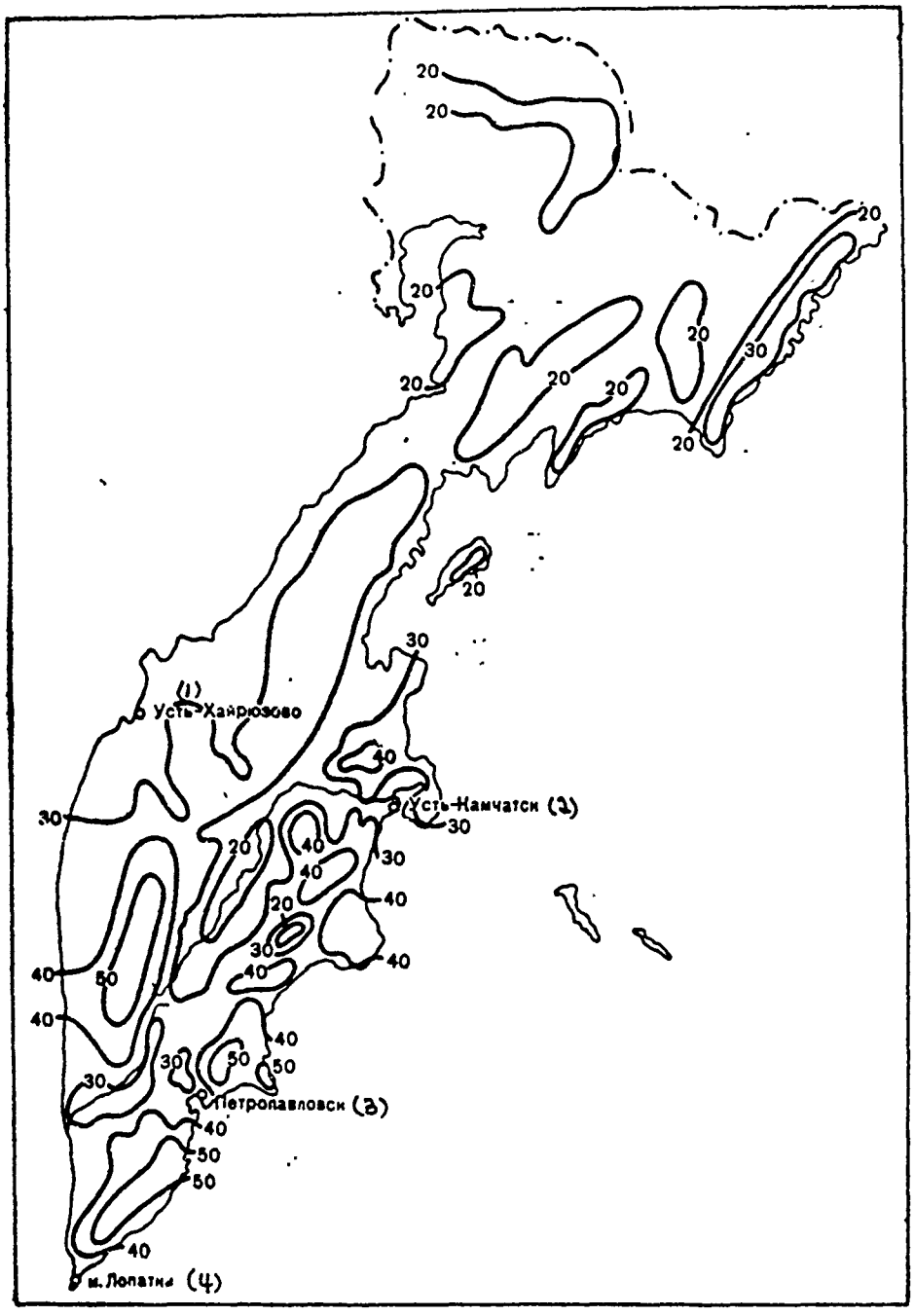

Fig. 12. Amount of precipitation in August by security with 90%.

Key: (1). Ust'-Khayruzovo. (2). Ust'-Kamchatsk. (3). Petropavlovsk. (4). Cape Lopatka.

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In the East coast on the average in the year a quantity of solid precipitation composes 45-60%, and liquid 30-45% (distribution of the amount of precipitation of different form during the year for st. Petropavlovsk, beacon shown in Fig. 13). In the valley r. of Kamchatka solid precipitation compose 50-55% of the annual quantity, liquid - approximately 40%, remaining part falls in the portion of the mixed precipitation.

Number of days in year with precipitation 0.1 mm and more varies on territory in following limits: in northern part of West coast of 140-160 days (Fig. 14), in south - from 180 to 210 days and more, in East coast - 140-200 days. Especially large period with the precipitation 0.1 mm and more on the Komandorskiye Islands (200-220 days in the year). In the valley r. of Kamchatka the duration of period with the precipitation 0.1 mm and is more 130-160 days. In other words, the number of days with precipitation in the territory in question is approximately half of all days of year, and on the coasts of the southern part of the peninsula and the Komandorskiy Islands - it is more than half. However, on the average during the precipitation day their duration is small, especially in the warm period of year. The number of days with the larger precipitation (10 mm and more) is changed along the territory in the following limits. In the southern part of the East coast the number of days with precipitation ≥ 10.0 mm is 1.5-2 times more than in the West coast and in the valley: in the first area it is 20-25 days, the secondly

and the third - 8-20 days (Fig. 15).

Monthly total precipitation give insufficient representation about weather in the days with precipitation, in particular about duration of precipitation. The number of days with precipitation of different value to a certain degree supplements, more precisely formulates data in the amount of precipitation, showing as frequently and what value drop out precipitation in the days. For example, according to the number of days with precipitation it is evident that in the territory in question are most frequent the precipitation in the autumn-winter period. However, the difference between the monthly number of days with precipitation during the year is comparatively small. For explaining the character of precipitation (continuous/lea type prolonged low-intensity or short-term shower) it is interesting to know the duration of precipitation during the precipitation day (Table III).

As can be seen from table III, average duration of precipitation during precipitation day along territory is changed in small limits. It should be noted that in southern part of both coasts in winter is observed the smaller duration of precipitation, than in the more northern areas and in the valley r. of Kamchatka. However, maximum amount of precipitation in winter here drops out.

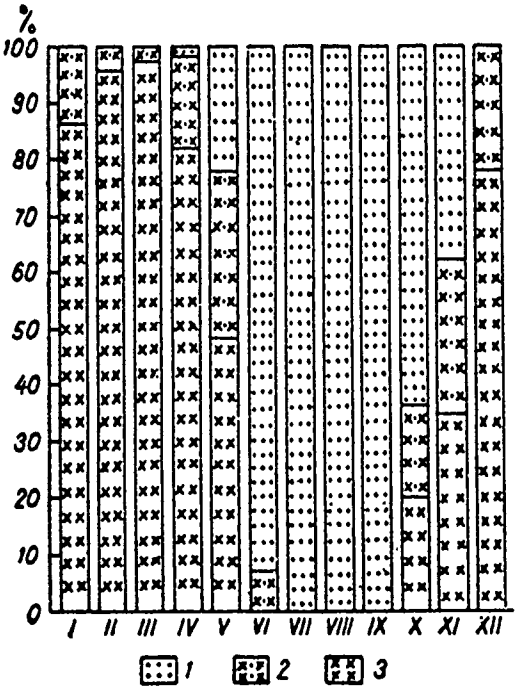

Fig. 13. Annual variation of amount of precipitation of liquid (1), mixed (2), and solid (3) on st. Petropavlovsk, beacon.

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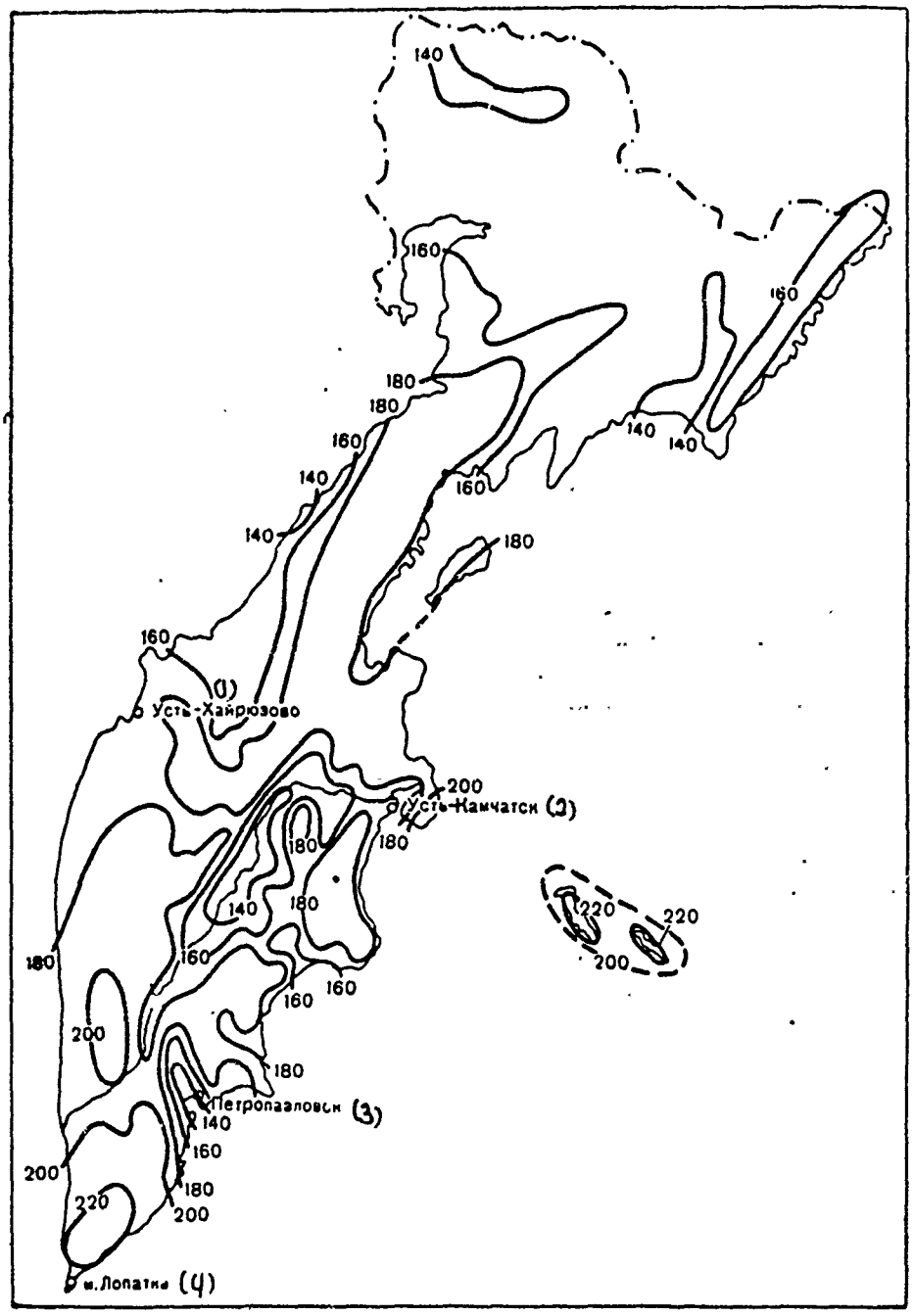

Fig. 14. Map/chart of number of days with precipitation in year ≥0.1 mm.

Key: (1). Ust'-Khayryuzovo. (2). Ust'-Kamchatsk. (3). Petropavlovsk. (4). Cape Lopatka .

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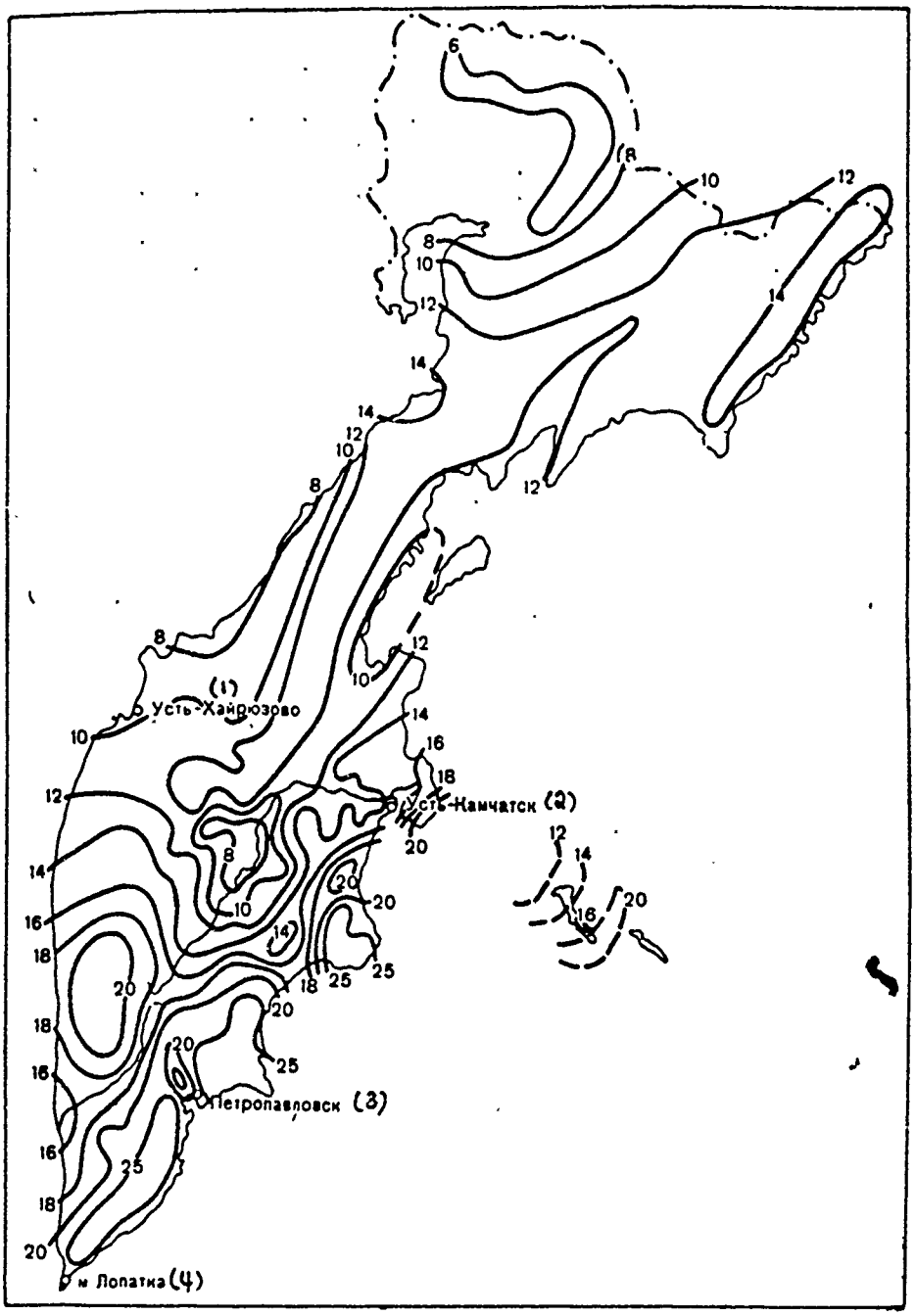

Fig. 15. Map/chart of number of days with precipitation in year ≥10 mm.

Key: (1). Ust'-Khayryuzovo. (2). Ust'-Kamchatsk. (3). Petropavlovsk. (4). Cape Lopatka.

This is explained by the special features of atmosphere circulation above the south of peninsula into cold half of year, which facilitates precipitation in the southern areas of larger amount of precipitation of shower type in comparison with the northern areas. In the coasts are in summer observed predominantly the prolonged precipitation of continuous/lea character. In the valley r. of Kamchatka in winter the duration of precipitation during the precipitation day is greatest. In summer despite the fact that at this time drops out the greatest amount of precipitation, their duration is less than in the cold period. This is caused by the large moisture content of atmosphere in the warm period and by the predominance of the shower precipitation, which drop out from the clouds of thermal convection, which are observed in this area. The continuous duration of precipitation in the separate years is changed in the sufficiently large limits: in the autumn-winter period of 24-120 hours into the warm - 15-60, and in the southern part of the peninsula (Cape Lopatka) to 94 hour. In warm half of year the number of rains 1.5-1.8 times exceeds the number of days with precipitation. The duration of separate rains during the precipitation day varies in the limits from several minutes to 1-2 days. The total duration of precipitation in the year varies on a territory from 1200 hours in the center section of the valley r. of Kamchatka to 2000 hours on the northeast (Fig. 16).

In annual variation greatest total duration of precipitation as their duration during precipitation day, is observed by winter, during

December - January, and on southeast - during March, smallest - from June through September. In the West coast, where the summer (during July-August) maximum of precipitation is well expressed, the large duration of precipitation is observed also during July (Fig. 17).

With increase in duration precipitation intensity usually decreases. In the territory of UGMS [Administration of the Hydrometeorological Service] in question their maximum intensity increases to the south. Precipitation intensity strongly varies both in the time and in the space. Indirectly about the precipitation intensity for the prolonged time interval it is possible to judge by their daily maximum. As a result of the large variability of the daily maximum of precipitation from year to year more complete characteristic can be obtained on the probabilities of its different values in the separate years, which are represented in Tables 5 and 6 this sections. In the territory in question the maximum of precipitation in the days in the months of the warm period of year depending on circulation conditions oscillates in the valley from 20 to 50 mm, in the West and East coasts - from 70 to 90 mm, and in the southeastern part of the peninsula it reaches 150 mm.

Table III. Average duration of precipitation during the precipitation day on the months (hours).

(1) Станция	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Верхне-Пенжино (2)	13.1	12.0	12.4	10 2	9.8	6.1	6.5	7.2	10.4	12.5	11.1	11.6
Апука (3)	10.1	9.7	10.5	10.4	9.2	9.3	10.3	10.8	9.4	10.2	9.6	10.3
Карагинский остров (4)	14.1	14.4	14.4	13.6	12.6	8.9	8.4	8.4	8.5	11.8	11.6	12.4
Усть-Хайрюзово (5)	12.2	11.2	11.4	11.2	9.7	9.3	11.1	10.3	9.6	11.3	11.6	11.2
Усть-Камчатск (6)	14.1	14.2	13.3	13.4	12.6	11.1	9.9	9.7	8.4	11.0	12.4	13.6
Эссо (7)	11.5	12.0	12.1	10.7	8.9	7.4	8.1	7.5	8.3	9.4	10.9	12.5
Мильково (8)	14.3	15.3	13.3	10.9	9.5	8.1	8.2	8.2	7.9	9.4	12.1	13.9
Петропавловск, город (9)	10.7	10.4	13.7	12.2	10.4	10.9	9.6	10.5	10.1	9.3	11.6	10.7
Усть-Большерецк (10)	10.9	10.8	10.8	10.0	9.3	8.9	11.0	9.8	7.9	8.0	9.4	10.1
Лопатка, мыс (11)	8.4	7.4	9.6	9.6	9.4	9.9	10.8	9.3	7.8	6.9	7.1	7.3

Key: (1). Station. (2). Verkhnye Penzhino. (3). Apuka. (4). Karaginskiy island. (5). Ust'-Khayryuzovo. (6). Ust'-Kamchatsk. (7). Esso. (8). Mil'kovo. (9). Petropavlovsk, city. (10). Ust'-Bol'sheretsk. (11). Lopatka, cape.

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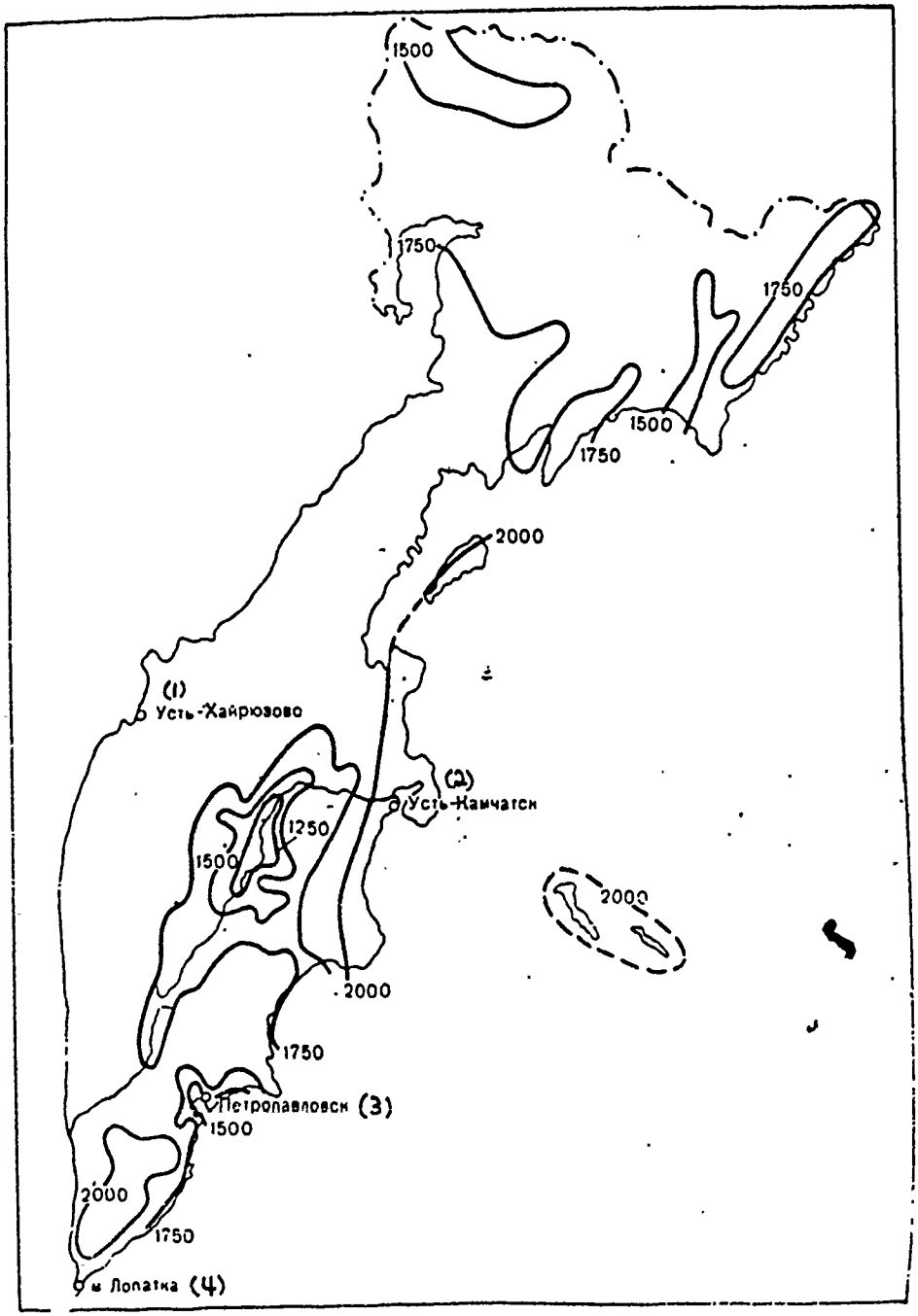

Fig. 16. Total duration of precipitation. Year.

Key: (1). Ust'-Khayryuzovo. (2). Ust'-Kamchatsk. (3). Petropavlovsk. (4). Cape Lopatka.

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The in winter daily maximum of precipitation reaches in the separate days in the southwestern coast 100 mm, on southeastern 200 mm, in the valley 30-50 mm.

On investigations of Petropavlovsk weather bureau, greatest amount of precipitation in peninsula is observed with passage of southern (from Japanese, yellow seas and areas of Pacific Ocean, adjacent to Japan) and western (from Transbaykal or average/mean current r. of Amur) cyclones. From the south the cyclones are characterized by large depth and together with the high winds bring with themselves many precipitation. Large amount of precipitation cause also the cyclones, which will steady in Kamchatka.

Snow cover.

Prolonged winter and high snow cover is one of essential features of climate of Kamchatka. On the larger part of the territory the winter lasts in the course of 5-6 months, while on the extreme north and in the mountain areas - it is more than 7 months. During the year in the peninsula of precipitation it drops out in solid form 30-55% and more. In connection with this the study of the characteristics of snow cover, special features of its occurrence in the territory in question is an important question.

Snow cover is factor, which exerts a substantial influence on

formation of climate in winter period, mainly as a result of large reflecting ability of surface of snow. A small quantity of radiation, obtained by winter from the sun, almost completely is reflected. Is especially great the albedo of the freshly fallen snow - more than 70%. Furthermore, Kamchatka rivers are supplied in essence due to the thawing of snow.

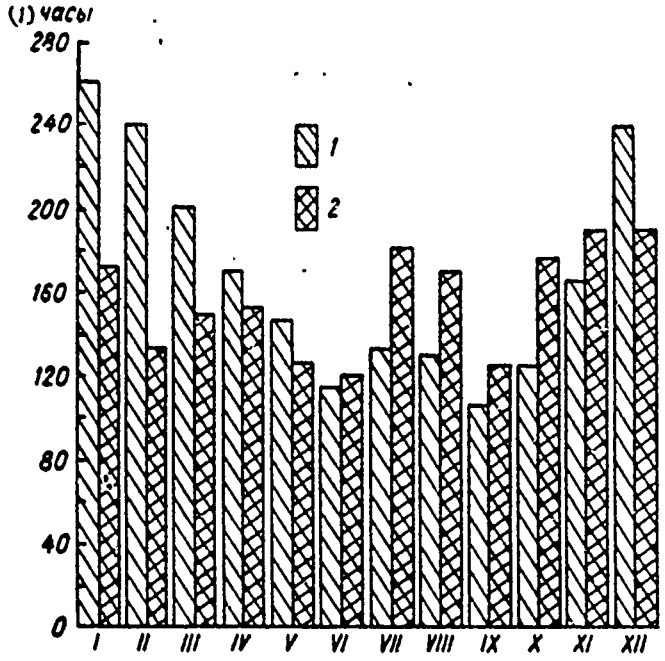

Fig. 17. Annual variation of duration of precipitation. 1 - Ust'-Kamchatsk (East coast), 2 - Ust'-Bol'sheretsk (Western coast).

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At the same time low thermal conductivity of snow impedes heat exchange between air and soil and contributes to retention/maintaining heat, accumulated in soil to autumn. Thus, snow cover protects soil from a deep freezing and thus it contributes to the absorption of melt water in spring, and it also shields the wintering plants from the frost.

Physicogeographical processes of winter period, including temperature conditions and soil freezing, condition for wintering winter crops, storage of moisture, etc., depend not only on height/altitude, but also on character of occurrence of snow cover.

Fig. 18a, b shows depth of freezing and soil temperature at depths of 20 cm in slightly snowy and heavy-snow winters. It is evident from an example that in spite of the low temperature of air in Ust'-Kamchatsk in winter of 1959-60 with high snow cover, depth of soil freezing was considerably less than in winter 1958-59 with lower snow cover.

In soft slightly snowy winters in agricultural areas of region winter cultures suffer from soaking, damping-off and effect of ice crust.

From character of snow cover to a considerable degree depends development of physicogeographical processes, also, in spring time (reserves of moisture, temperature and time of thawing of soil), when vegetation of larger part of plants begins.

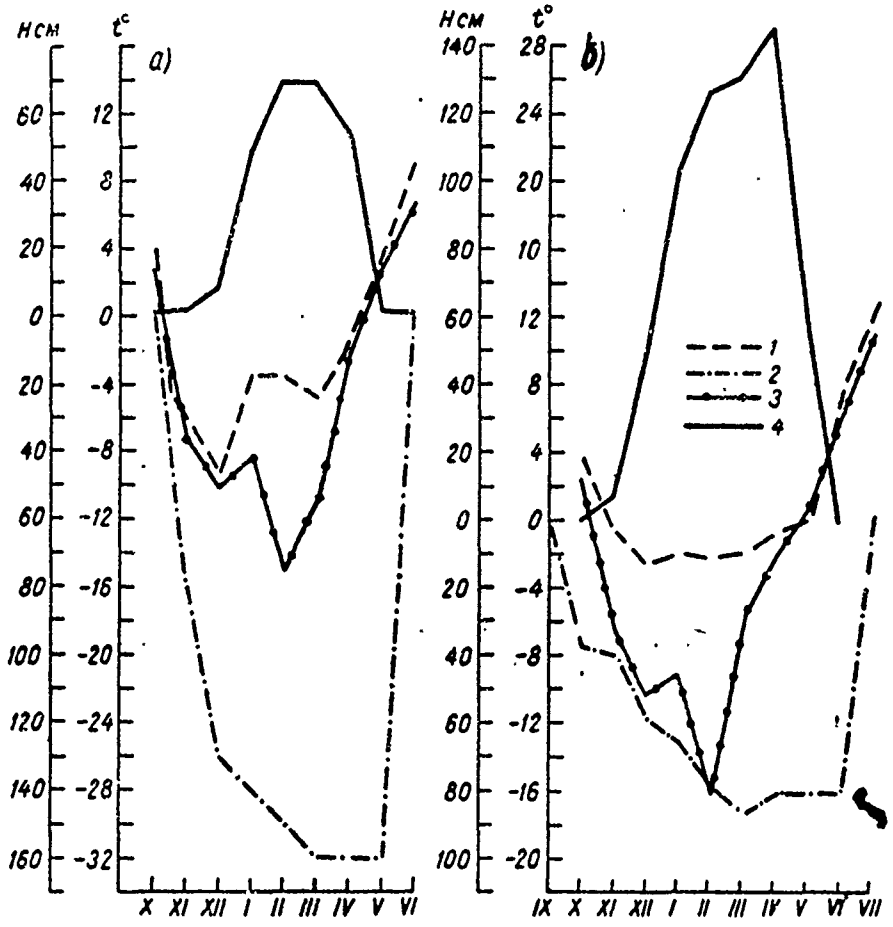

Fig. 18. Depth of soil freezing. A) slightly snowy winter, b) heavy-snow winter, 1 - the temperature of air, 2 - the depth of penetration of isotherm of 0° into the soil, 3 - the temperature of soil, 4 - depth of snow cover.

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Therefore in the set of the conditions, which ensure a considerable increase in the productivity, the corresponding place must engage the correct use of snow cover.

Water supplies in snow cover, character of its occurrence in

winter and thawing in spring, determine to a considerable degree value of spring runoff and, therefore, regime/conditions of rivers, etc. of basins.

Depth of freezing, determined by height/altitude and character of occurrence of snow cover, should be considered with pipe laying, with foundation of buildings, etc.

Value of density of snow cover enters into construction calculations during determination of loads due to snow on constructions.

Very considerable role, frequently negative, plays snow cover during operation of transport. The presence of snow cover with height/altitude in 10 cm and above determines the possibility of sleigh way. However, considerable depth of snow covers, large storages and transfers of snow during the frequent snow storms (snowstorm) impede motion on the roads, and they frequently make with its impossible.

Territory in question has large extent from north to south, considerable differences in thermal mode and in time of appearance and descent of snow cover in northern and southern areas. The more south is located this point, the more lately snow cover appears. Previously anything (in the first decade/ten-day period of October) it appears at the extreme north of peninsula and in the center section at the

heights/altitudes from 500 m and it is above. For example, at st. of Esso, which has the height of 480 m, snow cover appears on 5 October, and in the valley of Kamchatka on station Kozyrevsk - on 23 October.

In East coast snow cover appears on the average to one decade/ten-day period later than on west. In the West coast, eliminating southern part, in the valley of Kamchatka, and also in the northeastern coast snow cover appears the secondly - to third decade/ten-day period of October (Fig. 19). Last of all, in the second decade/ten-day period of November, snow cover appears at the southeast of peninsula (station Khodutka, Povorotnyy, cape).

As a rule, dates of precipitation of first snow are very close to autumnal date of transition/transfer of temperature of air through 0°. This conformity occurs almost in the entire territory of Kamchatka.

Oscillations/vibrations of periods of appearance of snow cover and year per annum are sufficiently great. On the larger part of the territory of Kamchatka in the years with the early spring they can be displaced to two-three weeks, while on the Komandorskiye Islands - for the month. On the north of region in the separate years snow cover can appear in the beginning of September (st. Verkhnye-Penzhino), while in the south of peninsula - in second half of September (1940, 1955, 1956, 1959). But if autumn is prolonged and is warm, then snow cover can appear on the north at the end of October, in the remaining

territory - in second half of November, and in the extreme south (Cape Lopatka) - in the beginning of December (1935, 1936, 1960).

First snow does not remain to lie/rest entire winter, but it melts under the effect of thaws and liquid precipitations. Only through one-two, and on the Komandorskiye Islands three weeks after the appearance of the first snow is formed stable snow cover. For example, on north and northwest of region it is formed 11-28 October, in the valley r. of Kamchatka of 28-31 October (in the Klyuchi - later, on 6 November). In the East coast South Ust'-Kamchatsk stable snow cover it is formed 13-23 November (Fig. 20).

Periods of formation of stable snow cover just as periods of appearance of snow cover, from year to year strongly vary depending on character of weather, determined by special features of circulation of before cold period.

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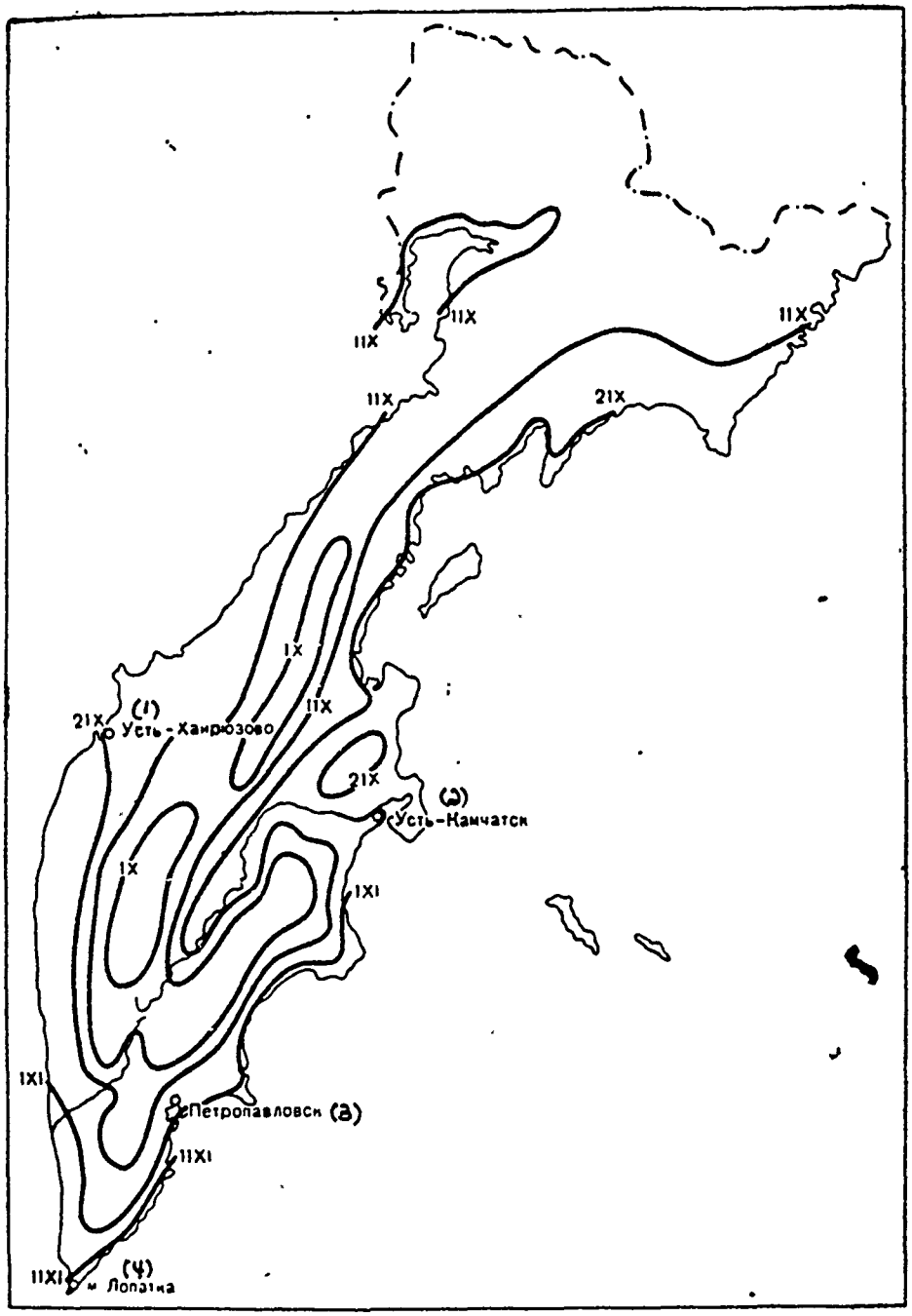

Fig. 19. Means of date of appearance of snow cover.

Key: (1). Ust'-Khayryuzovo. (2). Ust'-Kamchatsk. (3). Petropavlovsk. (4). Cape Lopatka.

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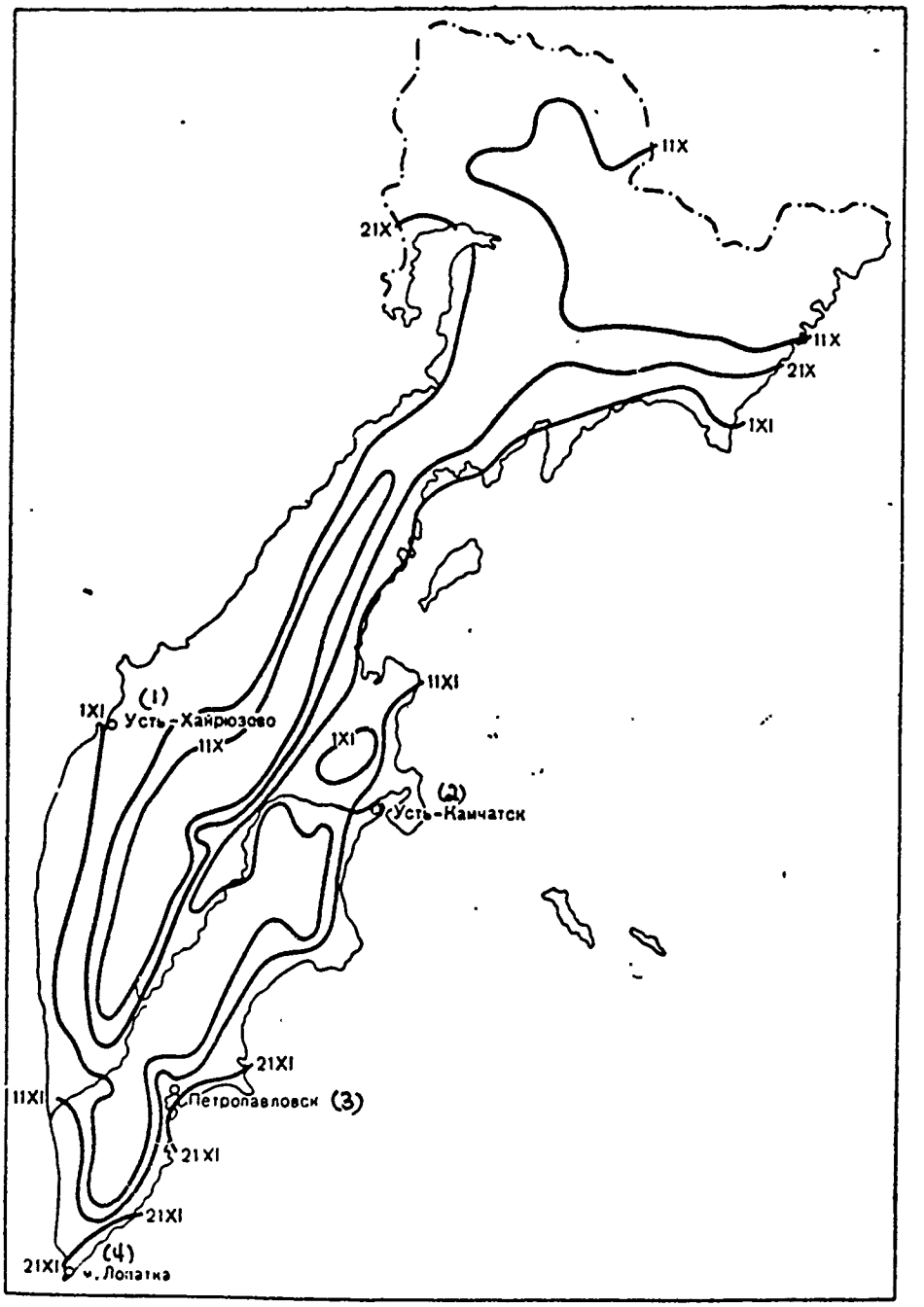

Fig. 20. Means of date of formation of stable snow cover. Key: (1). Ust'-Khayryuzovo. (2). Ust'-Kamchatsk. (3). Petropavlovsk. (4). Cape Lopatka.

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There are the years, when on the north of region stable snow cover is formed at the very beginning of October, in the south - in the beginning of November, and in the valley river of Kamchatka - to the middle of October (1948, 1953, 1954). Are at the same time possible the winters, when setting snow cover on the north occurs only in the beginning of November, in the south - at the end of December, and in the valley r. of Kamchatka at the end of November - beginning of December (1937, 1942, 1961). Thus, in the territory in question the difference in the dates of the formation of stable snow cover can reach two months.

In Table IV probability of dates of formation of stable covering for separate stations depending on mean of date is represented. As can be seen from table IV, on st. Petropavlovsk, city of the I with the mean of date formation of stable snow cover on 9 November in 50% of years stable snow cover is formed on 8 November and it is earlier, in 95% of years - on 2 December and it is earlier, and in 5% of years - on 22 October and it is earlier. The earliest date is noted on 13 October, it has a probability of less than 5%, i.e., is encountered more rarely than once a 20 years.

Its height/altitude gradually increases after setting of stable snow cover. In the third decade/ten-day period of October snow cover reaches in the West coast 10 cm, while in the center section, in the mountain areas 15 cm.

Most intense increase in depth of snow cover originates from of November to January, and in West coast - of November to December, i.e., in months with greatest frequency of cyclonic weather, when basic reserves of snow are created. Its maximum value snow cover reaches during March (the second - the third decade/ten-day period) or during April (the first - the second decade/ten-day period) (Fig. 21). At some stations (Yelizovo, Petropavlovsk, city II, Kozyrevsk, etc.), where the open sections are subjected to the action of high wind and depth of snow cover is less in comparison with the adjacent stations, the maximum of depth of snow cover falls to the second decade/ten-day period of February. In such areas snow cover converges earlier.

Observations of depth of snow cover are conducted in majority of cases in open sections (on racks) and in field (on snow surveying).

Distribution of snow cover along territory of Kamchatka and amount of precipitation depends on number of factors. Main things of them: the special feature of atmosphere circulation above the peninsula into cold half of year, area relief, exposure of slopes, proximity to the sea.

Table IV. Dates of the formation of stable snow cover of different security.

(1) Станция	(2) Средняя дата	(3) Вероятность образования в указанные даты и более ранние (%)							(4) Самая ранняя дата
		95	90	75	50	25	10	5	
Верхне-Пенжино (5) . .	12 X	29 X	24 X	17 X	11 X	5 X	2 X	30 IX	27 IX
Усть-Лесная (6). . . .	28 X	21 XI	14 XI	3 XI	24 X	17 X	14 X	13 X	7 X
Долиновка (7).	30 X	16 XI	10 XI	4 XI	30 X	23 X	17 X	14 X	8 X
Ука . (8)	1 XI	19 XI	16 XI	9 XI	1 XI	26 X	22 X	18 X	11 X
Ключи (9) . . . . . (10)	6 XI	26 XI	21 XI	15 XI	6 XI	28 X	21 X	17 X	17 X
Петропавловск, город I	9 XI	2 XII	27 XI	17 XI	8 XI	30 X	24 X	22 X	13 X
Апука (11)	8 XI	8 XII	3 XII	20 XI	7 XI	26 X	21 X	18 X	14 X
Усть-Камчатск (12) . .	13 XI	8 XII	1 XII	19 XI	11 XI	4 XI	26 X	22 X	16 X
Лопатка, мыс (13). . .	24 XI	8 XII	4 XII	29 XI	23 XI	16 XI	10 XI	7 XI	1 XI

Key: (1). Station. (2). Mean of date. (3). Probability of formation into dates indicated and earlier (%). (4). Earliest date. (5). Verkhnye Penzhino. (6). Ust'-Lesnaya (7). Dolinovka. (8). Uka. (9). Klyuchi. (10). Petropavlovsk, city I. (11). Apuka. (12). Ust'-Kamchatsk. (13). Lopatka, Cape.

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Very important role in the distribution, or more precisely the redistribution of snow cover, they play direction and wind velocity. The storage of snow in the lowered/reduced places shielded from the wind and its blowing away from the open windward sections occurs because of its effect.

Snow cover in Kamchatka is distributed extremely unevenly, and its height/altitude does not everywhere correspond to quantity of fallen precipitation. This to the larger degree depends on local conditions. Despite the fact that the considerable amount of

precipitation drops out in the southeastern coast of peninsula, depth of snow cover is here less than at some stations of the central and southern part of Kamchatka, distant from the sea. For example, in Petropavlovsk, city I during the cold period it drops out precipitation 670 mm, in Nachiki - 345 mm (Table I ("Precipitation"), and average from greatest decade/ten-day depth of snow covers is equal to respectively 57 and 139 cm.

Large depth of snow cover is observed also in Pushchino (162 cm), Pauzhetskiye Klyuchi (152 cm). These stations are arranged/located in comparatively narrow mountain valleys and are shielded by mountains from the action of high winds and effect of sea. Snow cover in the areas of these stations is immune to this blowing as in the coast. Here drops out also large amount of precipitation into cold half of year.

Depth of snow cover in open sections comprises: on extreme north of region and in West coast 30-60 cm, in southern part of West coast - 60-80 cm, in center section of valley r. of Kamchatka 45-60 cm. In the East coast snow cover will lie unevenly in comparison with west; depth of snow cover here varies from 50 to 105 cm.

In open agricultural fields in valley r. of Kamchatka depth of snow cover toward the end of winter occurs on 10-15 cm less than in shielded sections.

Fig. 22 depicts greatest decade/ten-day depth of snow cover in open sections. The character of the occurrence of snow cover is found in the direct dependence on the local conditions. On it have an effect not only a difference between protection and special features of relief, but also the character of the underlying surface (remainders/residues of grassy vegetation, ridges and furrow on the plowed land, etc.). Difference in depth of snow covers at the shielded and open places is the greater, the greater depth of snow cover. During the comparison of averages from the greatest ten-day heights/altitudes in these sections it turned out that in the southern part of the West coast depth of snow cover in the shielded sections on 20-40 cm, in the valley on 15 cm, in the East coast on 30- 70 cm is more than on those opened.

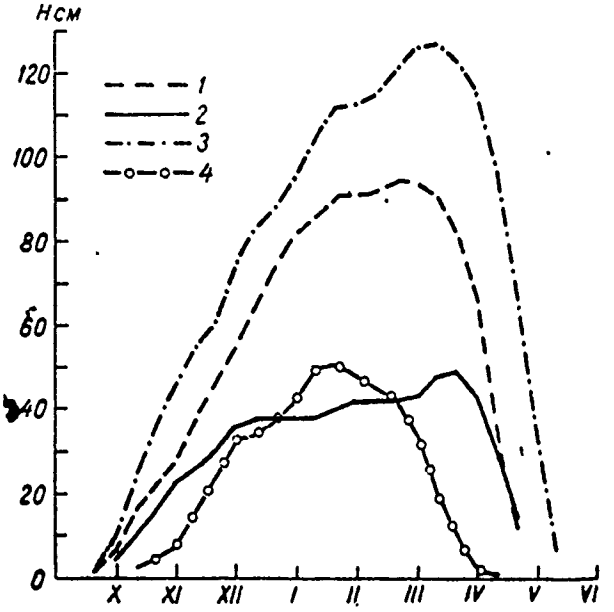

Fig. 21. Annual variation of depth of snow cover. 1 - Mil'kovo, 2 - Ust'-Khayryuzovo, 3 - Nachiki, 4 - Petropavlovsk, city II.

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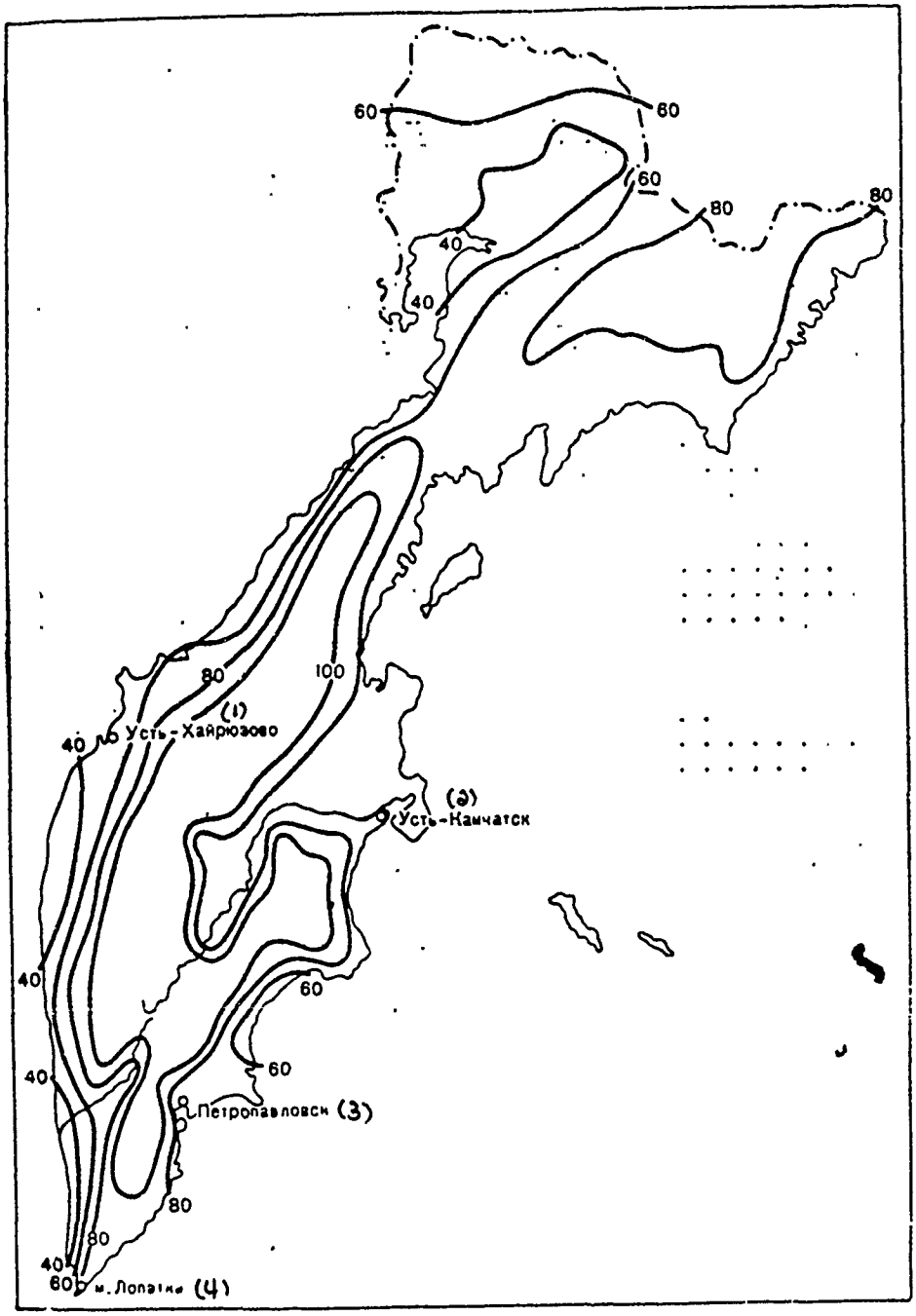

Fig. 22. Average/mean from greatest decade/ten-day depth of snow covers (cm).

Key: (1). Ust'-Khayryuzovo. (2). Ust'-Kamchatsk. (3). Petropavlovsk. (4). Cape Lopatka.

Like other meteorological elements, depth of snow cover considerably varies from year to year. For the demonstrative representation about the possible deviations from medium altitude in the open and shielded sections is led its security in the separate years (Table V).

As can be seen from Table V, in open fields, for example, in Kozyrevsk st. area, with average of greatest ten-day heights/altitudes of 46 cm in 90% of winters it is equal to 27 cm either more, and in 10% of winters - 73 cm or more. In the slightly snowy winters depth of snow cover can be only 22 cm, while into heavy-snow 84 cm.

Under conditions of non-chernozem region, which includes territory in question, snow cover with height/altitude about 30 cm already sufficiently reliably insulates soil from external oscillations/vibrations of temperature. Data of the security of the greatest ten-day heights/altitudes, placed in Table 9 of this section, show that on the larger part of the valley r. of Kamchatka this height/altitude has a security in 90% of winters.

From third decade/ten-day period of March - first decade/ten-day period of April, and at some stations from third decade/ten-day period of April depth of snow cover begins to decrease, at times drop out precipitation in the liquid state, frequent daytime thaws appear in coasts, snow thaws, it is condensed. The destruction of stable snow

cover and the descent of snow cover on the predominant part of the territory flows/occurs within the more compressed periods than its formation.

Territory in question nonsimultaneously is freed/released from snow (Fig. 23). First of all stable snow cover is destroyed in the coasts and in the valley r. of Kamchatka later - in the areas, distant from the sea and situated on the high altitude (Pushchino, Nachiki). For example, on st. Petropavlovsk, beacon snow cover are destroyed on 16 May. On st. of Nachiki, arranged/located approximately on the latitude of Petropavlovsk, beacon, but at the larger height/altitude, stable snow cover is destroyed only on 4 June. In the West coast stable snow cover is destroyed earlier than on east: in the first area - in first half of May, and the secondly - in second half of May or in the beginning of June. Is explained this by larger depth of snow cover in the East coast in comparison with west.

Table V. Greatest decade/ten-day depth of snow cover, possible in the separate years (cm).

(1) Станция	(2) Обеспеченность в процентах лет высоты указанной и большей							(3) Наибольшая декадная высота		
	95	90	75	50	25	10	5	(4) наибольшая	(5) средняя	(6) наименьшая
				(7) Открытое поле						
Верхне-Пенжино (8)	45	47	55	69	85	105	119	—	62	—
Усть-Воямполка (9)	15	17	21	29	41	49	56	53	31	12
Усть-Хайрюзово (10)	20	25	39	58	73	89	96	96	56	18
Африка, мыс (11)	30	36	45	57	78	102	111	117	61	25
Козыревск (12)	25	27	35	44	58	73	81	84	46	22
Мильково (13)	70	75	83	95	116	138	150	146	101	68
Елизово (14)	30	36	45	47	59	81	92	96	52	25
Лопатка, мыс (15)	29	35	54	79	117	148	162	161	82	30
				(16) Защищенный участок						
Карагинский остров (17)	93	95	102	112	121	134	145	133	111	91
Ключи (18)	50	72	90	116	144	163	173	172	113	50
Долиновка (19)	30	37	47	58	80	99	109	106	63	29
Петропавловск, город I (20)	60	75	87	99	117	149	175	171	104	60

Key: (1). Station. (2). Security in percentages of years of height/altitude of that indicated and larger. (3). Greatest ten-day height/altitude. (4). greatest. (5). average/mean. (6). smallest. (7). open field. (8). Verkhnye-Penzhino. (9). Ust'-Voyampolka. (10). Ust'-Khayryuzovo. (11). Africa, cape. (12). Kozyrevsk. (13). Mil'kovo. (14). Yelizovo. (15). Lopatka, cape. (16). Shielded section. (17). Karaginskiy island. (18). Klyuchi. (19). Dolinovka. (20). Petropavlovsk, city I.

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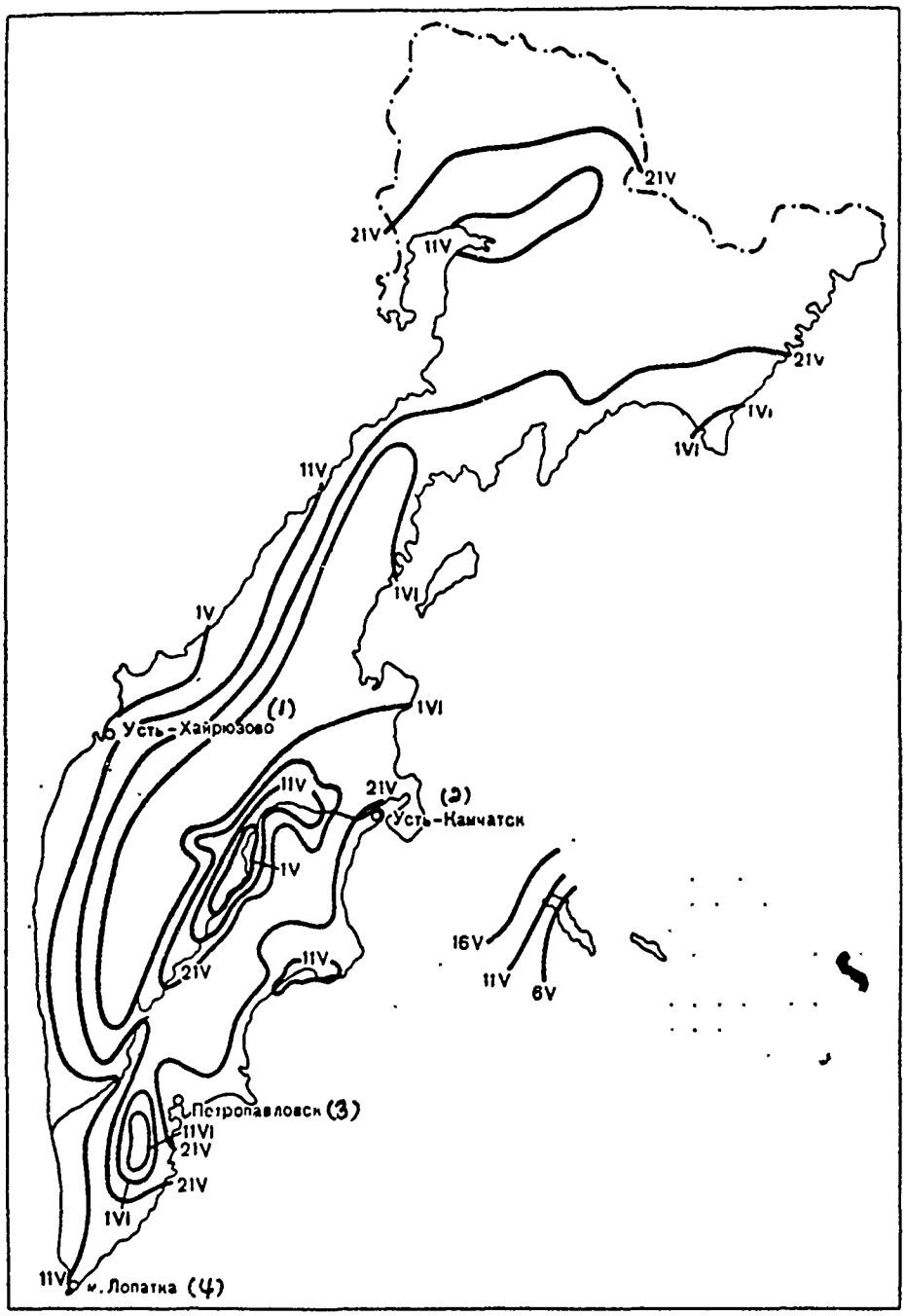

Fig. 23. Means of date of destruction of stable snow cover.

Key: (1). Ust'-Khayryuzovo. (2). Ust'-Kamchatsk. (3). Petropavlovsk. (4). Cape Lopatka.

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Intensity of descent of stable snow cover depends on local conditions. And in the forest the thawing of snow cover goes more slowly at the lowered/reduced lee. Thus, the mean of date of the destruction of stable snow cover in Petropavlovsk, city in the shielded section is noted on 15 May, and on that opened - on 1 May. However, in the vicinities of station, on the mounds, among the trees/wood snow lies/rests until June. On the slopes of mountain ridges and volcanos of Kamchatka at the heights/altitudes from 3000 to 3500 m and above snow lies/rests during only year.

Oscillation/vibration of dates of destruction of stable snow cover and year per annum is sufficiently great. In some years in the West coast and in the valley r. of Kamchatka it is destroyed at the end of March or in the middle of April, into others - at the end of May. In the East coast stable snow cover sometimes is destroyed in the middle of May, and in the separate years - at the end of May or first half of June.

Probability of dates of destruction of stable snow cover in separate years is given in Table VI. As can be seen from Table VI, on the north (st. Verkhnye Penzhino) region with the mean of date of the destruction of stable snow cover on 29 May in 90% of years it converges on 20 May and later, and in 10% of years - are later than on 9 June. On the southeast (st. Petropavlovsk, city I) with the mean of date on 15 May in 90% of years the snow converges later than on 7

May, also, in 10% of years - are later than on 30 May.

Frequently after destruction of stable snow cover it again lies down on brief period. But to the middle of June, as a rule, entire area in question is freed/released from snow cover.

Difference in dates of appearance of snow cover and formation of stable snow cover is more than in dates of destruction of stable covering and complete descent of snow (Table VII). In the first case the difference does not exceed one month, the secondly - one week.

Mean of date of descent of snow cover is usually close to spring date of transition of mean daily temperature of air through 0°. In Kamchatka this conformity is fulfilled well on the north of region and in the West coast. In the valley r. of Kamchatka and in the East coast, where depth of snow cover is more, the dates of the descent of snow cover lag behind the dates of the transition/transfer of the temperature of air through 0° and at the separate stations coincide with the dates of the transition/transfer of temperature through 5°.

Table VI. Dates of the destruction of stable snow cover of different security.

(1) Станция	(2) Средняя дата	Вероятность разрушения в указанные даты (3) и более поздние (%)							(4) Самая поздняя дата
		95	90	75	50	25	10	5	
Верхне-Пенжино (5)	29 V	17 V	20 V	25 V	28 V	3 VI	9 VI	11 VI	13 VI
Усть-Лесная (6)	9 V	17 V	22 IV	2 V	12 V	20 V	23 V	24 V	25 V
Долиновка (7)	1 V	15 IV	19 IV	27 IV	5 V	8 V	11 V	14 V	17 V
Ука (8) (9)	5 VI	17 V	23 V	2 VI	8 VI	12 VI	15 VI	17 VI	19 VI
Петропавловск, город I	15 V	5 V	7 V	12 V	17 V	23 V	30 V	3 VI	7 VI
Апука (10)	21 V	7 V	10 V	16 V	21 V	26 V	30 V	2 VI	10 VI
Усть-Камчатск (11)	19 V	6 V	9 V	15 V	21 V	26 V	30 V	1 VI	2 VI
Лопатка, мыс (12)	11 V	19 IV	24 IV	3 V	11 V	21 V	30 V	3 VI	9 VI

Key: (1). Station. (2). Mean of date. (3). Probability of destruction into dates indicated and later (%). (4). Latest date. (5). Verkhnye-Penzhino. (6). Ust'-Lesnaya. (7). Dolinovka. (8). Uka. (9). Petropavlovsk, city I. (10). Apuka. (11). Ust'-Kamchatsk. (12). Lopatka, cape.

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In separate years with early and warm spring descent of snow cover is observed at the end of April - first half of May (1921, 1945, 1956, 1962). However, in some years, upon the intrusion of the Arctic masses of air, the snowfall are possible even in second half of June (1941, 1947, 1951), but this snow usually lies/rests not long.

Number of days with snow cover in coasts decreases from north to south: in West coast from 210 to 180, on east from 220 to 170-180 days (Fig. 24). Its decrease in the East coast is expressed less clearly in comparison with west due to the more complicated physicogeographical conditions. The number of days with snow cover

increases with the removal/distance into the depth of peninsula and increase in altitude of terrain. For example, in the valley r. of Kamchatka from the north to the south increases the height/altitude of place above sea level. Grows/rises also height/altitude and duration of the occurrence of snow cover. Thus, in Kozyrevsk (height/altitude of above sea level 28 m) the number of days with snow cover is equal to 183, in Dolinovka the height/altitude of above sea level 100 m) - 188, into Mil'kovo (height/altitude of above sea level 200 m) - 200 and in Pushchino (height/altitude of above sea level 303 m) - 223.

In Nachiki st. area and on north (Verkhnye Penzhino) duration of occurrence of snow cover is 226-230 days.

Its density is one of characteristics of snow cover. Depending on density the thermal conductivity is changed and it stored up water in snow cover, which are of great interest to agriculture, account for runoff and so forth, etc.

Its average value at greatest depth of snow cover can serve as most significant characteristic of density. In the territory in question the density of snow cover in the field is changed in the following limits: in the valley r. of Kamchatka it composes 0.19-0.27, in the West coast - 0.26-0.32, and in its southern part the density is equal to 0.34-0.36, in the East coast - 0.28-0.35 g/cm^3 (Fig. 25). Almost in entire East coast, where wind velocities are above, the density of snow cover is greater than on west. In the

center section of the valley r. of Kamchatka the snow density is less than in the coasts because under the action of maximum wind velocities snow cover less is condensed.

Table VII. Differences in periods of appearance and formation of stable snow cover, its destruction and descent.

(1) Станция	Разности средних дат (2)		(1) Станция	Разности средних дат (2)	
	(3) Появление снежного покрова — образование устойчивого снежного покрова	(4) Разрушение устойчивого снежного покрова — сход снежного покрова		(3) Появление снежного покрова — образование устойчивого снежного покрова	(4) Разрушение устойчивого снежного покрова — сход снежного покрова
Верхне-Пенжино (5)	8	1	Африка, мыс (6)	20	1
Каменское (7)	2	5	Мильково (8)	12	4
Топата-Олюторская (9)	12	0	Сторож, бухта (10)	15	3
Корф (11)	14	1	Соболево (12)	10	3
Карагинский остров (13)	9	1	Начики (14)	7	0
Усть-Воямполка (15)	10	4	Шипунский, мыс (16)	17	2
Озерной, мыс (17)	10	1	Петропавловск, город II (18)	14	5
Усть-Хайрюзово (19)	11	1	Лопатка, мыс (21)	13	4
Ключи (20)	14	6			

Key: (1). Station. (2). Difference in average dates. (3). Appearance of snow cover - formation of stable snow cover. (4). Destruction of stable snow cover - descent of snow cover. (5). Verkhne-Penzhino. (6). Africa, cape. (7). Kamenskoye. (8). Mil'kovo. (9). Topata-Olyutorskaya. (10). Storozh, bay. (11). Korf. (12). Sobolevo. (13). Karaginskiy Island. (14). Nachiki. (15). Ust'-Voyampolka. (16). Shipunskiy, cape. (17). Ozernoy, cape. (18). Petropavlovsk, city II. (19). Ust'-Khayryuzovo. (20). Klyuchi. (21). Lopatka, cape.

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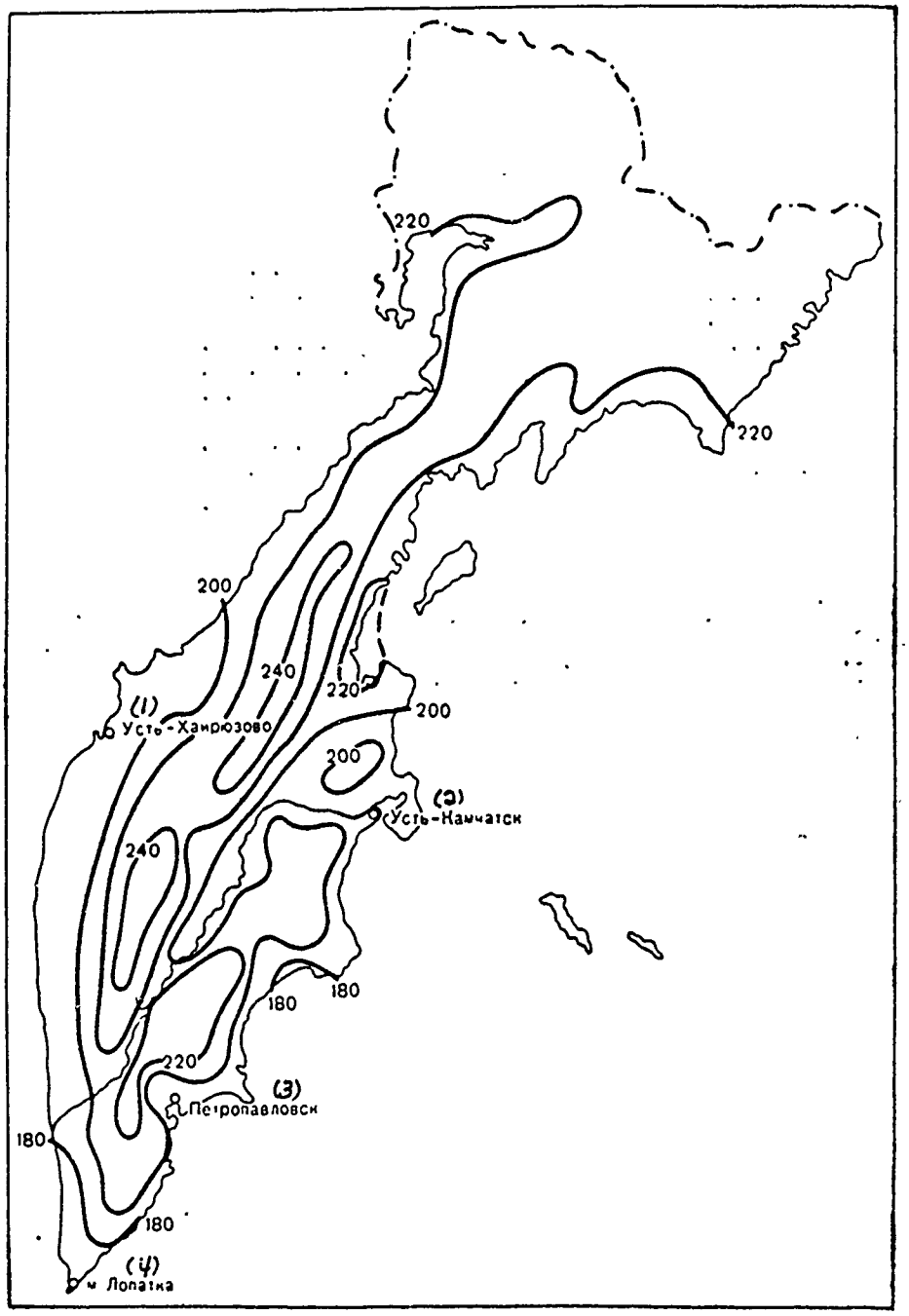

Fig. 24. Number of days with snow cover.

Key: (1). Ust'-Khayryuzovo. (2). Ust'-Kamchatsk. (3). Petropavlovsk. (4). Cape Lopatka.

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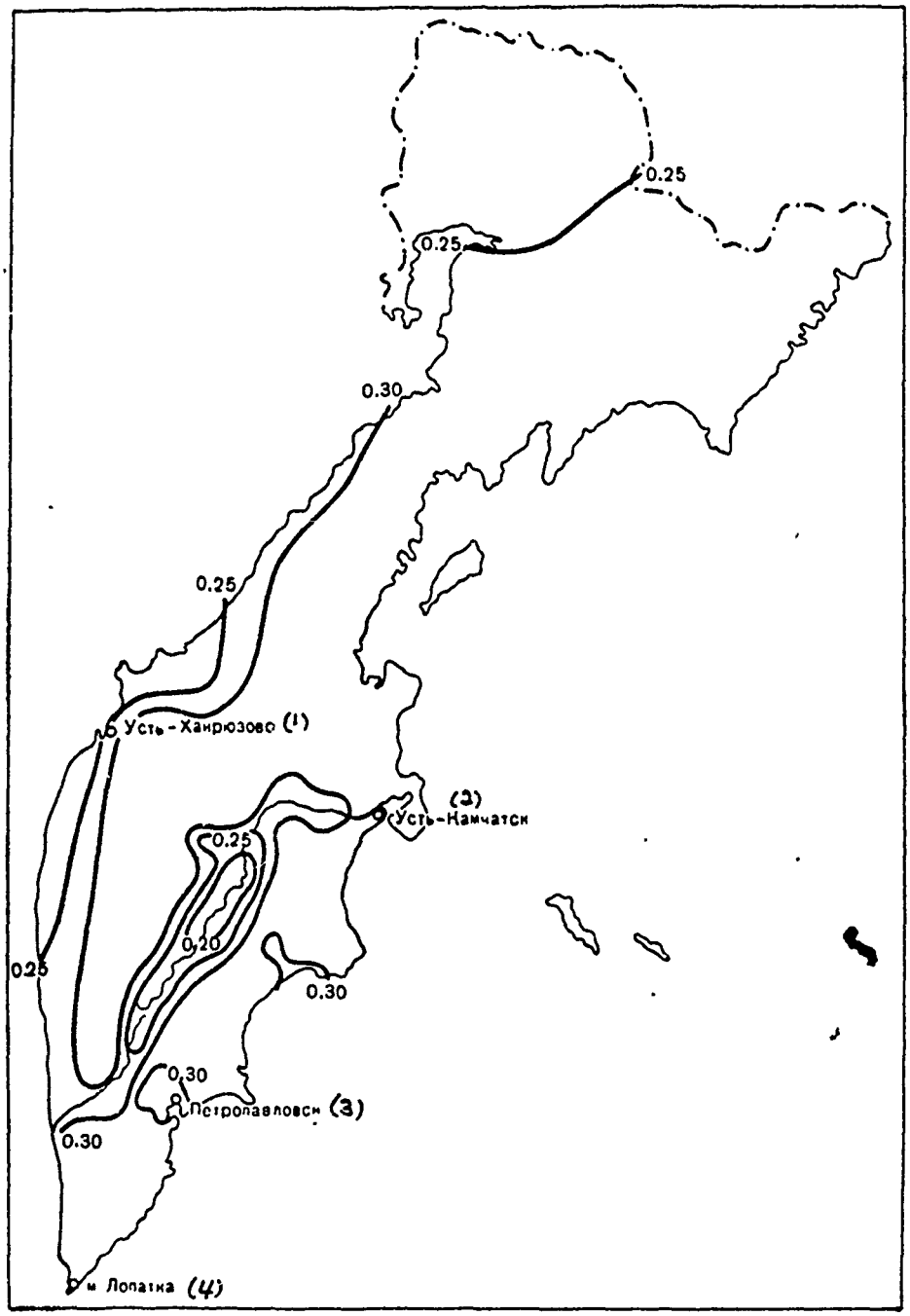

Fig. 25. Average density of snow cover.

Key: (1). Ust'-Khayryuzovo. (2). Ust'-Kamchatsk. (3). Petropavlovsk. (4). Cape Lopatka.

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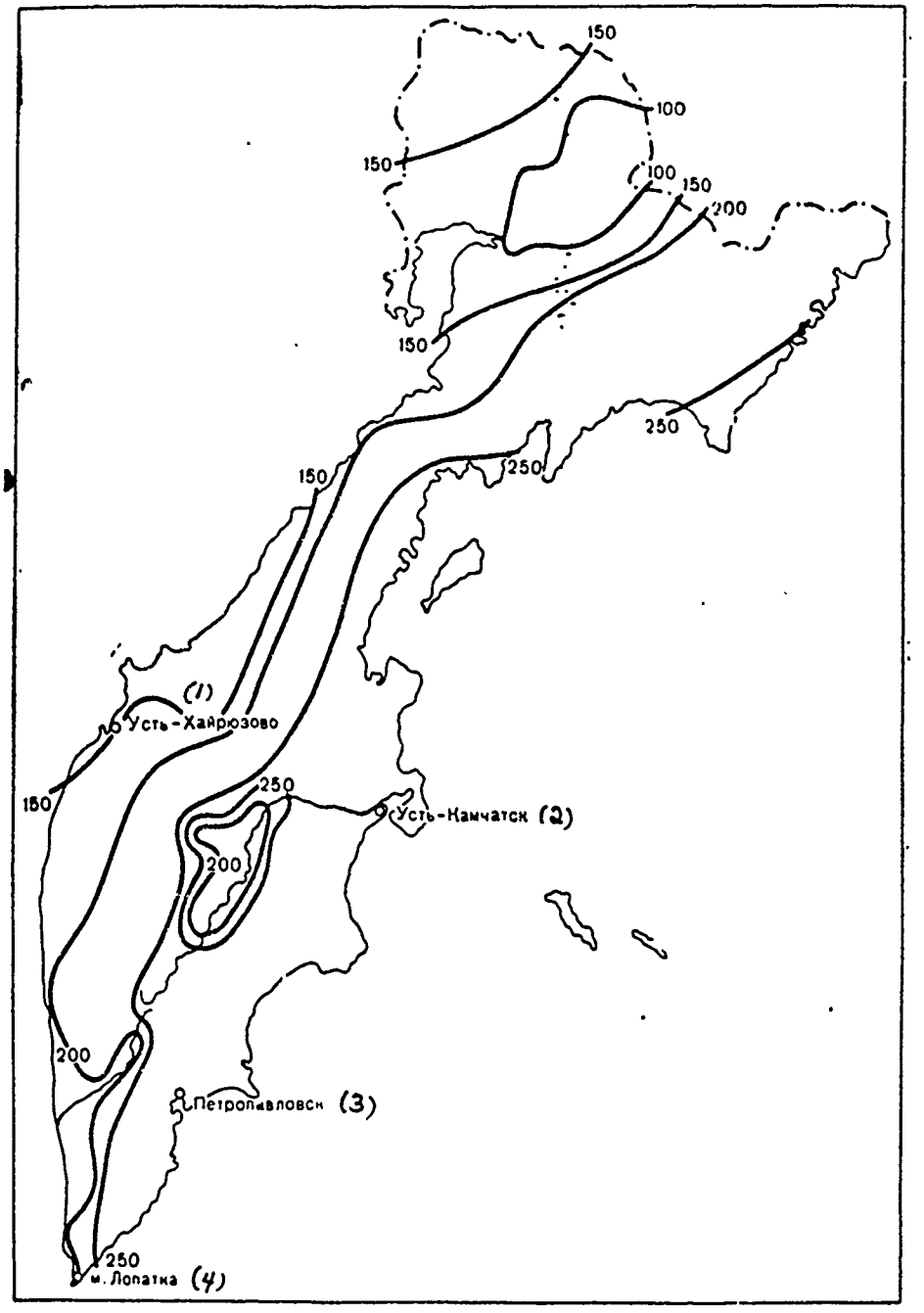

Fig. 26. Water supply in snow cover.

Key: (1). Ust'-Khayryuzovo. (2). Ust'-Kamchatsk. (3). Petropavlovsk. (4). Cape Lopatka.

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Water supply in snow cover is of great practical interest for national economy, since in conjunction with degree of intensity of thawing of snow cover are determined run off into basins, value of spring flood, reserve of moisture in soil, etc.

Distribution of water supply in snow cover as distribution of height/altitude, is characterized by large colorfulness. Just as depth of snow cover, value of the water supply depend on many factors: the height/altitude of place, its protection, brokenness of territory, distance from the sea. The distribution of the water supply in snow cover for the area in question is represented in Fig. 26. In the West coast it is 130-220 m, in the valley r. of Kamchatka 160-290 mm. In the East coast it stored up water as depth of snow cover, it is more than on west, and it varies within the limits of 200-250 mm.

Greatest water supply is noted in Nachiki - 530-600 mm and at height/altitude of 318 m (Pushchino) it is more than 450 mm.

Value of maximum water supply can be changed from one year to the next in considerable limits. In Table VIII for some stations the differences between the greatest and smallest water supplies are given.

Table VIII. Greatest and smallest supply of water (mm) in snow cover.

(1) Станция	(2) Максимум	(3) Минимум	(4) Разность	(1) Станция	(2) Максимум	(3) Минимум	(4) Разность
Верхне-Пенжино (5)	202	118	84	Сторож, бухта (6)	524	185	339
Корф (7)	406	123	283	Елизово (8)	264	70	194
Усть-Хайрюзово (9)	248	102	146	Начики (10)	792	259	533
Ключи (11)	407	159	248	Петропавловск, город II (12)	532	266	266
Усть-Камчатск (13)	470	188	282	Петропавловск, маяк (14)	325	108	217
Никольское (о. Беринга) (15)	403	52	351	Усть-Большерецк (16)	258	93	165
Долиновка (17)	353	85	268	Лопатка, мыс (18)	478	67	411

Key: (1). Station. (2). Maximum. (3). Minimum. (4). Difference. (5). Verkhnye-Penzhino. (6). Storozh, bay. (7). Korf. (8). Yelizovo. (9). Ust'-Khayryuzovo. (10). Nachiki. (11). Klyuchi. (12). Petropavlovsk, city II. (13). Ust'-Kamchatsk. (14). Petropavlovsk, beacon. (15). Nikolsk (Is. Behring). (16). Ust'-Bol'sheretsk. (17). Dolinovka. (18). Lopatka, Cape.

EXPLANATIONS TO THE TABLES.

Section 1. HUMIDITY OF AIR.

For characteristic of humidity of air in handbook are given three basic indices: vapor pressure, relative humidity of air and saturation deficit.

Pressure (or pressure) of water vapor (e), which is contained in air, is expressed in millibars [1].

FOOTNOTE. [1]. If necessary to have data of vapor pressure and saturation deficit in millimeters, it suffices values, placed in Tables 1, 2, 7 and 8, to multiply by 0.75. ENDFOOTNOTE.

It characterizes the moisture content of air. In the previous publications the vapor pressure was not entirely accurately called absolute humidity.

Relative humidity of air (r) presents relation of vapor pressure, which is contained in air (e), to saturation vapor pressure (E) at the same temperature, expressed in percentages. It characterizes the degree of the saturation of air by the water vapor

$$r = \frac{e}{E} \cdot 100\%.$$

Saturation deficit (d), or humidity deficit of air, presents difference between pressure of saturated (E) water vapor at this temperature and pressure of water vapor (e) containing in air. It, as vapor pressure, is expressed in the millibars.

$$d = E - e.$$

Maximum vapor pressure (E) depends on temperature of air and very rapidly decreases with its decrease: at temperature of 20° maximum vapor pressure reaches 23 mb., it decreases doubly at 10°, at 0° are 6 mb., with - 10° already 2.9 mb., at -20° only 1.2 mb. and at -30° - only 0.5 mb.

Data on humidity of air are acquired on the basis of observations on psychrometer, and at temperature of air it is lower than -10° - on hygrometer, installed in psychrometric shelter at height/altitude of 2 m of earth's surface.

Average monthly values of humidity of air are determined according to observational data within periods (into 1, 7, 13 and 19 hours) established since 1936.

Table 1. Average/mean monthly and annual vapor pressure.

Table 2. Average/mean monthly and annual vapor pressure in

different hours of day. Vapor pressure is one of the characteristics of the humidity of air. It indicates the quantity of water vapor, which is contained per unit of volume of air and is measured in the millibars.

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Data of tables are average many-year values of vapor pressure, which is contained in air, in each month and year (Table 1), also, in different hours of day (1, 7, 18, 19) (Table 2), obtained from observations within limits of period of 1936-1960. For the stations Elizovo, Kamchatka, agro and Karaginskiy island II is used the period on 1964. The average many-year values of vapor pressure are calculated by direct calculation of the series of observations with the duration not of less than 20 years. The stations, which have the period of the observations of 7-10 years, are given to a 25-year-old period method of differences. Since the humidity of air - value sufficiently stable and insignificantly changes in the time, series of observations into 20-25 years give already sufficiently stable averages.

In order to obtain representation about limits of oscillation of average/mean monthly vapor pressure, in Table IX are given its greatest and smallest average/mean monthly values by areas. As can be seen from Table IX, the limits of the oscillation of vapor pressure are sufficiently considerable during only year.

In territory of Kamchatskaya district vapor pressure is changed in large limits, which, as a rule, is connected with change in temperature of air: with increase in average/mean monthly temperature increases vapor pressure and vice versa.

In summer (during July) in northern part of West coast average/mean monthly vapor pressure is changed in value of 10.5-10.9 mb., in southern part (south 58° N) - 11.3-11.8 mb. In the very south of West coast (Lopatka, cape and Ozero), where average/mean monthly temperatures during July are lower than at the more northern stations, vapor pressure decreases to 10.1-10.9 mb.

Table IX. Greatest and smallest average/mean monthly vapor pressure during the period of 1936-1964 yr (mb.).

(1) Упругость пара	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
(2) Долина р. Камчатки												
(3) Наибольшая	3.8	3.2	4.1	4.6	6.4	10.8	14.8	14.9	10.3	7.0	4.2	3.8
(4) Наименьшая	0.9	1.0	1.4	2.7	4.8	7.4	10.6	10.6	7.2	4.0	2.0	1.0
(5) Юго-восточное побережье												
(3) Наибольшая	3.9	3.8	4.5	4.7	6.4	9.3	13.0	13.8	11.0	6.8	5.7	3.9
(4) Наименьшая	1.8	2.0	2.4	3.6	5.0	7.6	10.2	10.3	8.4	5.3	2.9	2.0
(6) Северо-восточное побережье												
(3) Наибольшая	4.6	3.6	3.5	4.6	6.6	9.2	13.0	12.8	9.5	6.4	4.2	4.2
(4) Наименьшая	1.2	1.1	1.2	2.4	4.0	7.6	10.4	9.8	6.3	3.0	1.[illegible]	1.1
(7) Юго-западное побережье												
(3) Наибольшая	3.8	3.2	4.4	5.4	6.9	9.4	13.0	14.9	11.8	8.0	5.8	4.3
(4) Наименьшая	1.4	1.7	2.1	3.4	5.5	7.7	10.0	10.8	9.5	6.4	3.2	2.0
(8) Северо-западное побережье												
(3) Наибольшая	3.8	2.7	3.3	4.2	6.5	8.6	12.4	12.0	9.7	5.9	3.9	3.4
(4) Наименьшая	1.2	1.2	1.4	2.4	4.2	7.2	9.6	10.0	7.2	4.4	2.4	1.3
(9) Север												
(3) Наибольшая	2.0	1.6	2.2	4.0	5.6	9.4	12.6	11.6	8.1	4.5	2.1	1.8
(4) Наименьшая	0.5	0.4	0.5	1.7	4.0	7.3	9.7	9.2	5.6	1.7	0.9	0.3

Key: (1). Vapor pressure. (2). Valley area of Kamchatka. (3). Greatest. (4). Smallest. (5). Southeastern coast. (6). Northeastern coast. (7). Southwestern coast. (8). Northwestern coast. (9). North.

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In East coast during July vapor pressure varies within the limits of 11.0-12.0 mb., while on Komandorskiye Islands and cape Africa 10.4-10.5 mb. This is connected with lower than at the surrounding stations, average monthly temperatures of air during July.

In internal areas of Kamchatka, where average/mean monthly

temperatures are higher than in coasts, vapor pressure also higher is 12-13 mb. At the stations, located in foothills of median ridge/spine (Esso, Nachiki, Nachikinskoye lake), the vapor pressure during this period is below - 11.1-11.5 mb., i.e., it decreases with an increase in altitude of terrain. For example, a decrease in the vapor pressure with an increase in altitude of terrain on 400 m comprises during May - with the average/mean elasticity 5 mb. - 0.7 mb., during June - with the average/mean elasticity 9 mb. - 1.1 mb., during July - with the average/mean elasticity 13 mb. - 1.8 mb., during August - with the average/mean elasticity 13 mb. - 2.1 mb. In practice it does not occur in the cold time of the year of a change in the vapor pressure with the height/altitude.

In winter (during January) vapor pressure (1.0-1.4 mb.) smallest throughout entire territory is observed at very northern stations, and also in valley area of Kamchatka (1.4-1.8 mb.), where lowest average/mean monthly temperatures of air at this time of year are noted.

On majority of stations of West coast during January vapor pressure is 2.0-2.2 mb., and in its southern part (south of Ust'-Bol'sheretsk) increases to 2.5-3.3 mb.

Vapor pressure at stations of East coast is very diverse in connection with different physicogeographical conditions in separate points/items of coast. On the open, jutting in the sea capes, the

vapor pressure rises to 3.0-3.5 mb. In other points/items of East coast it is equal to 2.2-2.8 mb., on the Komandorskiye Islands the vapor pressure during January comprises more than 4 mb.

Annual variation of vapor pressure is analogous to annual variation of temperature of air: with one maximum and one minimum. The smallest vapor pressure is observed in the coldest months of year, and greatest - in warm. The annual variation of vapor pressure is identical both on the coastal points/items and in the points/items, distant from the sea: the minimum of vapor pressure is observed during January - February, maximum during July - August. Difference lies in the fact that in the points/items, distant from the sea, the amplitude of the oscillations of vapor pressure is more than in the coastal.

Effect of special feature of arrangement under different physicogeographical conditions most substantially affects change of vapor pressure in warm time of year (Table X).

Table X. Average/mean monthly vapor pressure in the points, which are found under varied conditions of location (mb.).

(1) Станция	(2) Местоположение	V	VI	VII	VIII	IX	X
(3) Петропавловск, город	(4) На берегу Авачинской губы, в 10 км от выхода в Тихий океан	5.9	8.7	12.0	12.8	9.8	6.1
(5) Петропавловск, маяк	(6) На мысу высотой 120 м, омываемом водами Тихого океана	5.8	8.4	11.5	12.3	9.7	6.0
(7) Большерецкий совхоз	(8) В 40 км от берега Охотского моря	6.1	8.7	12.1	12.9	10.1	6.7
(9) Усть-Большерецк	(10) На берегу Охотского моря	6.1	8.4	11.3	12.5	10.6	7.2

Key: (1). Station. (2). Location. (3). Petropavlovsk, city. (4). On the shore of Avachinskoy bay, 10 km from emergence into Pacific Ocean. (5). Petropavlovsk, beacon. (6). On cape with height/altitude of 120 m, washed by water of Pacific Ocean. (7). Bol'sheretskiy state farm. (8). In 40 km from coast of Sea of Okhotsk. (9). Ust'-Bol'sheretsk (10). On the shore of Sea of Okhotsk.

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Table 2 gives data of vapor pressure on periods. Into the table entered 17 stations, which have the period of the observations of 20-25 years, and 3 stations (Upper-Penjino, Tigil' and the Bol'sheretskiy state farm) with the period of the observations of 10-15 years.

Data of vapor pressure into separate hours of day give exemplary/approximate representation about its daily variation. The daily variation of vapor pressure has close connection with daily variations of the temperature of air.

In valley area of Kamchatka in cold season daily variation of vapor pressure grows with increase in temperature of air. The greatest values fall to 13 hours, when are noted greatest temperatures, and smallest values - in the morning hours, when before sunrise the temperature of air reaches the minimum.

Minimum values of vapor pressure are noted in warm season before sunrise, then it gradually increases and it reaches maximum value before sunset.

Daily variation of vapor pressure in coasts differs somewhat from its daily variation in valley area of Kamchatka. In the coasts western and eastern in the cold season the vapor pressure of minimum value reaches in the morning hours, and maximum - 13 hours; in the warm season the maximum also is noted 13 hours, and the minimum - in the night time (1 hour).

In Table XI daily amplitudes of vapor pressure on stations, located in different parts of peninsula, are given. Given amplitudes somewhat less than actual, determined according to the hourly observations under the different conditions of location.

Daily amplitudes of vapor pressure in month are small and comprise in cold period of 0.1-0.4 mb. in coasts, 0.3-0.6 - in valley area of Kamchatka, and in warm period - 0.4-1.5 mb. in coasts and

0.6-2.8 mb. - in valley.

Table 3. Average/mean monthly and annual relative humidity of air.

Table 4. Average/mean monthly and annual relative humidity of air in different hours of day. Data of tables are the average many-year values of the relative humidity of air in each month and year (Table 3), also, in different hours of day (Table 4), obtained from the observations within the limits of the period of 1936-1960. For the stations Elizovo and Karaginskiy island II is used the period to 1964.

Table XI. The daily amplitude of vapor pressure according to the observations into 1, 7, 13 and 19 hours (mb.).

(1) Станция	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
(2) Верхне-Пенжино	0.1	0.2	0.3	0.6	0.5	0.4	0.8	1.3	0.7	0.4	0.2	0.1
(3) Корф	0.0	0.0	0.3	0.4	0.4	0.6	0.6	0.7	0.4	0.3	0.2	0.1
(4) Усть-Хайрюзово	0.2	0.3	0.7	0.7	0.8	0.7	1.4	1.5	1.0	0.4	0.4	0.1
(5) Усть-Лесная	0.1	0.3	0.6	0.5	0.5	0.8	1.0	1.2	1.0	0.4	0.4	0.1
(6) Ключи	0.3	0.3	0.5	0.3	0.2	0.6	1.5	1.5	0.7	0.2	0.3	0.1
(7) Мильково	0.4	0.6	0.6	0.0	0.3	0.5	2.3	2.8	1.2	0.3	0.6	0.4
(8) Эссо	0.3	0.4	0.6	0.4	0.3	0.6	0.9	1.4	0.9	0.4	0.4	0.3
(9) Никольское	0.1	0.2	0.2	0.2	0.3	0.4	0.6	0.6	0.6	0.2	0.2	0.1
(10) Петропавловск, город	0.1	0.2	0.3	0.3	0.3	0.6	1.0	0.9	0.7	0.4	0.2	0.1
(11) Петропавловск, маяк	0.1	0.2	0.2	0.2	0.2	0.4	0.6	0.7	0.5	0.2	0.3	0.1
(12) Лопатка, мыс	0.0	0.1	0.2	0.2	0.2	0.4	0.7	0.6	0.5	0.1	0.1	0.1

Key: (1). Station. (2). Upper-Penjino. (3). Korf. (4). Ust'-Kharyuzovo. (5). Ust'-Lesnaya. (6). Klyuchi. (7). Mil'kovo. (8). Esso. (9). Nicol. (10). Petropavlovsk, city. (11). Petropavlovsk, beacon. (12). Lapotka, cape.

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Average many-year values are obtained by direct calculation from series of observations with duration not of less than 15-20 years. Series of observations with the duration of 5-10 years are given in a 25-year-old period method of differences.

Differences in average/mean monthly relative humidity of air in stations Klyuchi and Petropavlovsk, beacon during two periods 1951-1960 and 1941-1950 are given in Table XII. In the cold season on station Klyuchi they compose 0-2%, in the warm time - 1-3%. On station Petropavlovsk, beacon during the year they compose 0-6%, which indicates the instability of average/mean during the decennial periods

and about the inadmissibility of use short series/rows without bringing.

In separate years average/mean monthly relative humidity of air can considerably differ from many-year average. The limits of oscillation in different hours of day during the period of 1936-1960 on the stations Klyuchi and Petropavlovsk, beacon are placed in table the XIII, and greatest deviations of average/mean monthly relative humidity from the norm are given in Table XIV.

Table XII. Differences in the average/mean monthly relative humidity of air into 7 and 13 hours during periods 1951-1960 and 1941-1950.

(1) Часы	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
					(2) Ключи							
7	−1	0	2	−2	−1	1	−1	2	1	0	0	−1
13	0	0	−1	0	1	−2	−3	−1	0	0	1	−1
					(3) Петропавловск, маяк							
7	−1	0	1	−3	−4	2	3	3	1	2	6	0
13	−1	1	1	−2	−6	0	5	5	2	4	−3	0

Key: (1). hours. (2). Klyuchi. (3). Petropavlovsk, beacon.

Table XIII. Greatest and smallest average/mean monthly relative humidity of air into 1, 7, 13 and 19 hours during the period of 1936-1960 (%).

(1) Часы	(2) Влажность	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
						(3) Ключи							
1	(4) Наибольшая	89	89	87	84	85	92	92	92	94	86	90	91
	(5) Наименьшая	73	73	68	68	73	76	81	83	81	62	72	75
7	Наибольшая	89	91	89	88	84	86	89	93	95	90	92	91
	Наименьшая	74	74	72	72	65	73	78	77	81	66	75	75
13	Наибольшая	87	86	77	67	66	71	77	74	72	75	83	91
	Наименьшая	71	71	53	54	44	46	56	53	53	43	64	74
19	Наибольшая	83	87	81	72	73	74	81	84	84	80	87	91
	Наименьшая	73	69	56	60	54	50	63	64	73	58	66	73
						(6) Петропавловск, маяк							
1	Наибольшая	83	89	83	89	94	96	96	94	94	90	84	89
	Наименьшая	71	64	65	69	76	85	81	86	81	70	70	70
7	Наибольшая	86	89	87	86	91	95	95	94	95	89	88	89
	Наименьшая	73	68	68	67	74	81	83	85	80	72	72	73
13	Наибольшая	84	87	81	81	87	91	93	89	87	77	84	82
	Наименьшая	69	62	56	63	71	75	71	72	64	56	64	69
19	Наибольшая	83	83	82	88	88	93	93	92	90	83	84	83
	Наименьшая	60	56	60	64	71	80	78	80	74	65	65	63

Key: (1). hours. (2). Humidity. (3). Klyuchi. (4). Greatest. (5). Smallest. (6). Petropavlovsk, beacon.

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It is evident from Table XIV that deviations below average of average monthly value of relative humidity on station klyuchi reach 29% in cold season, and 25% in warm season. On station Petropavlovsk, beacon of deviation to the cold season not are more than 18%, in the warm - 20%.

Average/mean monthly relative humidity of air in territory of Kamchatka is very high at any time of year and oscillates by summer in limits from 65% in central areas to 90-95% in coasts, and in winter - from 65% on southeast of peninsula to 80-85% in remaining areas. The average/mean monthly relative humidity of less than 80% does not occur in the extreme south of peninsula (Lopatka cape), but in the warm season it reaches 93-97%; the same high relative humidity occurs also on the Komandorskiye Islands. Although the average/mean monthly relative humidity not in one of the areas of region reaches 100%, during the separate days and on the periods in many points/items it reaches such values.

In Table XV probabilities of average/mean monthly relative humidity 13 hours on gradations with specific values of average/mean many-year during warm period are given. It is evident from Table XV that in the coasts on the average in the month is not observed relative humidity 30-50%, but the greatest probability is necessary on gradation 71-80 and 81-90%.

During April, for example, in coasts with average/mean many-year relative humidity 75% years, when during April average/mean monthly relative humidity will be 51-60 or 91-100%, are possible.

In valley area of Kamchatka probability of relative humidity of less than 50% is great. Especially during May, June, when it reaches 50-75% with average/mean monthly relative humidity 45-50%. The humidity of higher than 80% in 13 hours from April through August is not encountered at all.

Value of relative humidity of air as other meteorological elements, depends on conditions for arrangement of station, which more sharply becomes apparent in warm period (Table XVI). In summer near the sea the relative humidity of air is higher than in the distance from it (for example, data of stations Petropavlovsk, beacon and Petropavlovsk, city, the Bol'sheretskiy state farm and Ust'-Bol'sheretsk). The humidity is increased in the open coast of Pacific Ocean (Petropavlovsk, beacon and Lopatka, cape), and in the valley area of Kamchatka (Mil'kovo) is considerably below.

Dependence of humidity of air on location of point should be considered during use of data of Table 3 and 4 for points/items, not placed into these tables.

Table XIV. Deviations of average/mean monthly relative humidity from the many-year average (%).

(1) Отклонение	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
					(2) Ключи							
(3) Наибольшее:												
(4) положительное	7	10	15	17	16	23	16	13	15	18	13	8
(5) отрицательное	—9	—10	—21	—17	—25	—25	—20	—17	—26	—29	—15	—10
					(6) Петропавловск, маяк							
(3) Наибольшее:												
(4) положительное	10	15	13	13	13	8	8	7	11	18	14	12
(5) отрицательное	—16	—18	—18	—13	—10	—13	—17	—15	—20	—16	—10	—14

Key: (1). Deviation. (2). Klyuci. (3). Greatest. (4). positive. (5). negative. (6). Petropavlovsk, beacon.

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Table XV. Probability of the average/mean monthly relative humidity of air 13 hours with the specific values of average/mean many-year (%).

(1) Средняя многолетняя	(2) Влажность (от — до)						
	31—40	41—50	51—60	61—70	71—80	81—90	91—100
(3) Западное и восточное побережья							
(4) Апрель							
70			14	36	40	9	1
75			4	25	47	21	3
80				14	36	40	9
85				4	26	46	24
90					14	36	50
(5) Май							
75			9	16	48	17	10
80				9	41	35	15
85				9	16	48	27
90					9	41	50
(6) Июнь							
75				27	43	24	6
80				7	43	34	16
85					27	40	33
90					7	43	50
(7) Июль							
75			8	25	32	17	18
80				19	31	31	19
85				8	25	32	35
90					19	31	50
95					8	25	67
(8) Август							
75			3	25	43	24	5
80				12	38	35	15
85				3	25	43	29
90					12	38	50
95					3	25	72
(9) Сентябрь							
70			15	35	32	14	4
75				30	40	20	10
80				15	35	32	18
85					30	40	30
90					15	35	50
(10) Долина р. Камчатки							
(4) Апрель							

50		50	41	9		
55		26	49	25		
60			50	41	9	
			(5) Май			
45	25	50	21	4		
50	10	40	38	12		
55	•	25	50	21	4	
60		10	40	38	12	
			(6) Июнь			
50	5	45	39	10	1	
55		25	46	25	4	
			(7) Июль			
60			50	40	10	
65				84	16	
			(8) Август			
60		12	38	42	8	
65		2	23	55	20	
			(9) Сентябрь			
55		22	63	14	1	
60		9	41	46	4	
65			22	63	14	1

Key: (1). Average/mean many-year. (2). Humidity (from - to). (3). Western and East coasts. (4). April. (5). May. (6). June. (7). July. (8). August. (9). September. (10). Valley area of Kamchatka.

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Data of Table 4 approximately characterize daily range of relative humidity. The greatest relative humidity usually is at 1 one in the morning and can reach in summer months 90-95% in the entire territory of region, with exception of its northern part and southeastern coast, where its value less than 90%. The smallest relative humidity is observed 13 hours and oscillates by summer in limits of 70-85% in the coasts, increasing to 90-95% in the extreme south of peninsula. In the areas, distant from the coast (in the foothills of ridges, in the valley area of Kamchatka and on the

mainland part of the region), the minimum humidity 13 hours decreases to 50-65%.

During separate days during June-August relative humidity even in coasts can be lowered to 30-40%, while in rare cases it is below, which is caused by action of foehns. Thus, in the days 17 and 18 June, 1966, on station Petropavlovsk, city due to the foehn effect relative humidity decreased from 65 to 41%.

Table XVI. Relative humidity of air 13 hours in the points, which are found under varied conditions of location (%).

(1) Станция	(2) Местоположение	IV	V	VI	VII	VIII	IX	X
(3) Петропавловск, город	(4) На берегу Авачинской губы, в 10 км от выхода в Тихий океан	63	67	72	75	75	70	63
(5) Петропавловск, маяк	(6) На мысу высотой 120 м, омываемом водами Тихого океана	72	77	84	84	82	76	64
(7) Большерецкий совхоз	(8) В 40 км от берега Охотского моря	73	72	70	78	78	70	74
(9) Усть-Большерецк	(10) На берегу Охотского моря	81	82	86	90	89	82	79
(11) Кроноцкое озеро	(12) Горное озеро	57	53	54	63	64	58	55
(13) Лопатка, мыс	(14) Открытый мыс (южная оконечность полуострова)	89	91	93	95	95	90	82
(15) Мильково	(16) Центральная часть долины реки Камчатки	52	48	49	61	61	55	53
(17) Начики	(18) Горная долина (высота 326 м)	61	62	58	66	69	64	67

Key: (1). Station. (2). Location. (3). Petropavlovsk, city. (4). On the shore of Avachinskii bay, 10 km from emergence into Pacific Ocean. (5). Petropavlovsk, beacon. (6). On cape with height/altitude of 120 m, washed by water of Pacific Ocean. (7). Bol'sheretskiy state farm. (8). In 40 km from coast of Sea of Okhotsk. (9). Ust'-Bol'sheretsk. (10). On the shore of Sea of Okhotsk. (11). Kronotskoye lake. (12). Mountain lake. (13). Lopatka, cape. (14). open cape (southern tip of peninsula). (15). Mil'kovo. (16). Center section of valley of river of Kamchatka. (17). Nachiki. (18). Mountain valley (height/altitude of 326 m).

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Relative humidity in coasts in the course of twenty-four hours (according to data of four-urgent observations) changes very insignificantly, amplitude of its oscillation in summer time comprises in coasts 7-15%, on Komandorskiye Islands 6-9%. In the valley area of

Kamchatka the oscillations of relative humidity in the course of twenty-four hours are sufficiently considerable and in the summer time compose 20-40%.

Hourly data, obtained on recordings of hygrograph, give more precise representation about daily variation of relative humidity. The years as a result of small daily variations of the relative humidity of difference in the daily amplitudes, calculated according to hourly data also of four periods, are insignificant in the cold period.

In warm period of year, when daily variation of humidity is expressed more clearly, daily amplitude of relative humidity of air, determined according to hourly data, as a rule, to 2-6% is more than determined within four periods of observations (Table XVII), since maximum and minimum of relative humidity do not fall for established/installed periods of observations.

Since relative humidity of air increases, or it decreases gradually and within periods of observations insignificantly differs from maximum and minimum, then for approximate characteristic of daily variation completely it is possible to utilize data of relative humidity in four periods of observations.

Table 5. Number of days with relative humidity ≤30% in any of the periods of observations and ≥80% in 13 hours. Data of this table are

the number of days with the low (≤30%) and high (≥80% in 13 hours) humidity, which can serve as the characteristic of dryness and humidity of air.

Data are acquired by direct calculation on 23 stations, which have series of observations not less than 20 years, within limits of period of 1936-1960.

Relative humidity ≥80% is observed 13 hours fairly often in territory of region; even average monthly values in coasts (western and eastern) in summer time 13 hours reach 80-85%. On the Komandorskiye Islands (Is. Bering) during only year relative humidity composes 80-90%. In the year the number of days with humidity ≥80% here composes 236, the same number of days and on station of Ust'-Bol'sheretsk, and in the extreme south of peninsula (Lopatka, cape) - such days 276. The number of moist days decreases with the distance from the coast. In the valley area of Kamchatka, in the mountain areas and the northern mainland part of the number domain of days with relative humidity ≥80% in the year composes 60-115 and falls in essence for the cold period. In the warm period of year the number of moist days occurs not more than 5-6 in month.

Table XVII. Differences in the daily amplitudes of the relative humidity of air, determined according to hourly data also in four periods of observations (%).

(1) Станция	IV	V	VI	VII	VIII	IX
(2) Усть-Хайрюзово	—1	—2	0	2	3	3
(3) Мильково	2	5	3	5	6	6
(4) Усть-Камчатск	0	0	4	1	1	4
(5) Никольское (о. Беринга)	2	—6	—4	—2	1	2

Key: (1). Station. (2). Ust'-Khairyuozo. (3). Mil'kovo. (4). Ust'-Kamchatskii. (5). Nicol (Is. Bering).

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In coasts, where peak relative humidity is observed by summer, greatest number of days with relative humidity ≥80% falls for warm period of year. For example, to st. blade, cape the number of moist days during July and August composes 30, in Ust'-Bol'sheretsk and on the Komandorskiye Islands their 26-28.

Number of days with relative humidity of air ≤30% in territory of region is very small. Their sum in the year comprises in valley 18, in the northern mainland part (Upper-Penjino) - 10, in the mountain part of the peninsula (Esso) - 13, on the West coast and the northeast of their peninsula it is less than 1, in the southeastern coast - 1-2, and in the extreme south of peninsula, Karaginskij and the Komandorskiye Islands of such days never it is.

Greatest number of dry days in annual variation is observed in

valley and mountain part of peninsula usually in May-June, and on north of region during June-July (3-6 days). In the remaining territory the number of days with relative humidity ≤30% is very small during only year.

Table 6. Frequency of the relative humidity of air 13 hours in different limits. In order to more widely open the content of average many-year values, in this table the frequency of different values of relative humidity 13 hours, calculated in the percentages of the total number of observations in each month, is placed. In the table are placed data of 21 stations, which have observations in the limits of the period of 1936-1960.

Numbers less than one mean that humidity of corresponding limit is observed yearly.

In contrast to Table 5, in which is given number of days with relative humidity 13 hours ≥80%, in present table is given frequency of different values of humidity at intervals through 10%. If necessary to calculate the number of days with relative humidity ≥80% according to Tables 6 it suffices to summarize data of gradations 80-100%, to multiply sum by the number of days of the given month and to divide into 100.

As can be seen from Table 5, in valley area of Kamchatka, foothills of median ridge and extreme north) (Upper-Penjino region

humidity during separate days in rare years in summer can be lower than 20%, but frequency of these values does not exceed 1-1.5%. Are noted several cases with the humidity of less than 20% on the cape Africa and by Petropavlovsk beacon. In the remaining points of West and East coasts this low humidity is not observed.

In valley area of Kamchatka (Mil'kovo and Klyuchi) relative humidity 10-20% is noted only in the beginning and end of warm season, but its frequency is insignificant and in Klyuchi composes 0.3%, while in Mil'kovo not more than 1%. The greatest frequency of relative humidity in Klyuchi is necessary on gradation 40-60% in spring and in autumn even 50-70% in the middle of summer, in Mil'kovo in spring and in autumn it 30-50%, and in July-August 50-70%. In the cold season the greatest frequency of relative humidity falls to two latter/last gradations, i.e., 80-100%.

On Komandorskiye Islands (Nicol) and southern tip of peninsula (cape Lopatka) frequency of relative humidity 30-50% does not exceed during year 1.5-3%, at the same time frequency of relative humidity 80-100% comprises in amount of 45-72% in cold season and 58-98% in summer.

On southeast of peninsula (Petropavlovsk, beacon) greatest frequency of relative humidity also falls to gradation 80-100% and reaches in summer months 73%.

Frequency of relative humidity 20-40% is small in West coast. Its greatest values fall to the warm period of year and they decrease from the north to the south from 4.3% in Ust'-Lesnoj to 0.3 in Ust'-Bol'sheretsk. The greatest frequencies are necessary on gradation 70-100% and reach in amount of 97% in summer 87% in winter.

Table 7. Average/mean monthly and annual saturation deficit of air.

Table 8. Average/mean monthly and annual saturation deficit of air in different hours of day. Data of these tables are the average many-year values of a saturation deficit of air by water vapor in each month and year (Table 7), also, in different (1, 7, 13 and 19) hours of day (Table 8), obtained from the observations within the limits of the period of 1936-1960.

For series of observations by duration not less than 20 years average many-year values are calculated by direct calculation. Series/rows with the smaller period of observations are given in a 25-year-old period method of differences.

In separate years average monthly values of saturation deficit differ from average/mean many-year most considerably in warm period of year, in cold period these deviations are small (Table XVIII).

In territory of Kamchatka in annual variation saturation deficit of maximum value amounts to in warm period of year.

In valley area of Kamchatka and on mainland part of region it is equal to 5.0-6.0 mb., on coasts and islands 1.5-3 mb.

Peculiar annual variation is observed on southern tip of peninsula (cape Lopatka), where in warm season saturation deficit has smallest values, approximately 0.3-0.4 mb., and its maximum falls in October-November and is 1.1-1.3 mb. In the remaining territory of the region of the smallest value a saturation deficit amounts to in the cold time (December and January). Its average monthly value is 0.2-0.7 mb., which increases on the southeast of peninsula to 1.1-1.4 mb.

Value of saturation deficit as relative humidity of air, depends on location of station (Table XIX). These differences more brightly are expressed in the warm season.

On open capes (Lopatka, cape), and also on Komandorskiye Islands saturation deficit is less than in coasts, and in valley area of Kamchatka (Mil'kovo and Klyuchi) it is considerably more.

Table 8 gives values of daily variation of saturation deficit. The daily variation is expressed sufficiently vividly in the warm season.

Maximum value of saturation deficit is noted in all areas of region 13 hours, smallest 1 hour. The years of a change in the saturation deficit in the course of twenty-four hours are small in the cold time. Its smallest values are noted in 1 and 7 hours, and 13 hours begins the maximum, which at many stations is held to 19 hour.

Differences in saturation deficit in 13 and 1 hour characterize daily amplitude. Daily variations are most clearly expressed in the warm time of the year (in May-September). In the valley area of Kamchatka they reach 3-6 mb., and on the mainland part (Upper-Penjino) region in a June-September they reach 3-8 mb. In the coasts the daily amplitude reaches 1.5-3 mb., but on cape Lopatka and in Nicol it is only 0.5-1.2 mb.

In cold season throughout entire territory of peninsula daily variations are very insignificant, only 0.1-2.0 mb.

Table XVIII. Average and the greatest deviations of an average/mean monthly saturation deficit from the many-year average (mb.).

(1) Отклонение	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
				(2) Ключи								
(3) Среднее ±	0.4	0.5	0.8	1.6	3.0	4.9	4.7	3.7	2.6	2.1	0.9	0.4
(4) Наибольшее:												
(5) положительное	0.2	0.3	0.4	0.2	1.2	2.4	1.7	2.1	0.9	1.5	0.4	0.3
(6) отрицательное	—0.2	—0.3	—0.2	—0.3	—0.9	—2.1	—1.9	—1.1	—0.5	—0.8	—0.4	—0.3
				(7) Петропавловск, маяк								
(3) Среднее ±	0.8	0.9	1.0	1.3	1.5	1.5	2.0	2.2	2.1	2.4	1.3	0.8
(4) Наибольшее:												
(5) положительное	0.2	0.4	0.3	0.7	0.9	0.9	1.8	1.1	1.1	0.6	0.3	0.4
(6) отрицательное	—0.3	—0.5	—0.4	—0.4	—0.7	—0.8	—1.0	—0.7	—1.0	—1.2	—0.4	—0.4

Key: (1). Deviation. (2). Kluchi. (3). Average. (4). Greatest. (5). positive. (6). negative. (7). Petropavlovsk, beacon.

Table XIX. Average/mean monthly saturation deficit in the points, which are located in different conditions of location, in the warm period of year (mb.).

(1) Станция	IV	V	VI	VII	VIII	IX	X
(2) Ключи	1.6	3.0	4.9	4.7	3.7	2.6	2.1
(3) Петропавловск, маяк	1.3	1.5	1.5	2.0	2.2	2.1	2.4
(4) Лопатка, мыс	0.5	0.4	0.4	0.3	0.4	0.8	1.3
(5) Никольское (о. Беринга)	0.8	0.9	0.9	0.9	1.1	1.5	1.5
(6) Мильково	1.9	3.9	5.8	5.1	4.0	3.0	2.2

Key: (1). Station. (2). Klyuchi. (3). Petropavlovsk, beacon. (4). Lopatka, cape. (5). Nicol (Is. Bering). (6). Mil'kovo.

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Section 2.

ATMOSPHERIC PRECIPITATIONS.

Atmospheric precipitations are characterized by their quantity, duration, intensity, number of days with p.ecipitation of different value, by form of precipitation (snow, rain, mixed precipitation). In this part of the handbook the amount of precipitation is represented by monthly total precipitation, by total precipitation during cold (November-March) and warm (April-October) periods and in the year. The average values and total precipitation of different probability are given for these periods. Furthermore, precipitation is characterized by maximum value in the days.

All these characteristics, and also number of days with precipitation of different value are obtained on basis of observations on rain gage with protection of Nipher, who was accepted by network/grid of stations and posts of 1890 prior to beginning of 1950s, and on precipitation meter of Tret'yakov, which acts on network/grid from 1950s on present time. Both instruments - rain gage with the protection of Nipher and the precipitation meter of the construction/design of Tret'yakov - measure the precipitation insufficiently accurately, especially in winter. In the measurement

of precipitation several forms of systematic errors appear..

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This of the loss of the assembled precipitation to the wetting of precipitation-measuring bucket, the evaporation of precipitation from the bucket for the time between the termination of rain and the period of measurement, and also the instrument errors, connected with the wind effect. The systematic insufficient consideration of precipitation due to the wind effect is basic error of both instruments. The disturbance/perturbation of air flow near the precipitation-measuring bucket leads to the fact that in it falls less precipitation than would fall out to the same area under the conditions of the undisturbed flow. Wind effect especially strongly affects the accuracy of the measurements of solid precipitation. The less the wind, the more precisely the precipitation is measured. Most correctly a quantity of fallen precipitation is determined by precipitation meters, installed in shielded from the wind places, for example, in a vast forest clearing, in a park, a garden or a court, surrounded from all sides by construction and trees. However, in this case precipitation meter must be so distant from the surrounding objects that it would not be shielded with the oblique precipitation and so that into it would not fall the snow from the nearest objects.

Precipitation meter of Tret'yakov has considerably smaller wind error, than rain gage with protection of Nipher. Differences in readings/indications of two instruments for solid precipitation are

composed on the larger part of USSR 10-20% of total precipitation on the rain gage. Depending on average wind speed, vulnerability of instrument from the wind and the temperature conditions this difference in some areas reduces to zero, while in the conditions of Kamchatka it reaches 300-500% due to the high winds, especially in the winter time. The accuracy of measurement of liquid precipitations in both instruments in the majority of points is approximately identical. However, as parallel observations showed, in the areas with high wind velocities readings/indications of rain gage can differ by 10-20% from readings/indications of precipitation meter even in summer (Nicol, Petropavlovsk, beacon).

In handbook series of observations on rain gage and precipitation meter for liquid precipitations are accepted uniform in view of small differences in readings/indications of these instruments. The observed data on the rain gage, that relate to the period with the solid and mixed precipitation, are cited to readings/indications of

precipitation meter with the aid of the conversion factors, which are determined from the parallel observations according to the rain gage and the precipitation meter and are placed in the appendix.

Precipitation meter of Tret'yakov is not sufficiently precision instrument for measuring precipitation. Besides the losses of the precipitation to the wetting, evaporation and of the wind insufficient consideration of precipitation, with the very high winds occurs the inflation of precipitation into the precipitation meter during the snow storms. The errors of precipitation meter as far as possible are taken into consideration during the preparation of present handbook. Together with average/mean many-year observed total precipitation led to readings/indications of precipitation meter (Table 1), in the handbook total precipitation, corrected by the introduction of corrections for the wetting of precipitation-measuring bucket and for the wind insufficient consideration of precipitation is given (Table 1a).

Losses of precipitation by evaporation were not taken into consideration due to insufficient approval of method of their calculation up to moment of preparation of handbook. This error is small in comparison with the errors of the first two forms. The sizes/dimensions of the inflation of precipitation during the snow storms at present are not yet studied.

Pluviograph is second instrument, which measures precipitation,

(recorders of rain). It is used on the network of the USSR stations since 1936. With pluviographs is measured a quantity, duration and the intensity of liquid precipitations. Observational data on the pluviograph are used in the handbook for determining the maximum precipitation intensity in different time intervals.

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Information about duration of precipitation, published in handbook, is obtained according to data of visual observations, since pluviograph does not record duration of precipitation of snow and small liquid precipitations poorly are considered (drizzle, weak continuous rain character). The number of days with precipitation of different form (solid, liquid, mixed) also is given according to the data of visual observations.

Table 1. Average amount of precipitation, led to readings/indications of precipitation meter.

Table 1a. Average amount of precipitation with the corrections to readings/indications of precipitation meter. Amount of precipitation is characterized by the height/altitude of the layer of water (in the millimeters), which was being formed on the horizontal surface from the fallen rain, drizzle, abundant it grew and fog, the melted snow, hail and snow pellets, in the absence of runoff, infiltration and evaporation.

Data of Table 1 and 1a are average monthly, seasonal and annual amounts of precipitation, calculated in 20-40 years within limits of period from 1891 through 1965. 1891 is accepted as beginning of period of observations, included in processing, for two reasons. The standard level of the installation of the instrument, which measures the precipitation (intake at the height/altitude of 2 m) was accepted at this time and was initiated the mass installation of rain gage with the protection of Nipher. Furthermore, up to 1891 the network of stations was too rare for bringing the short series of observations to the more prolonged period. The duration of the period of the averaging of data in the amount of precipitation must be not smaller, but larger than according to the temperature of air, since for the precipitation are characteristic large variability from one year to the next, exceeding variability of the temperature of air. The presence of anomalous periods (very arid or moist years) noticeably affects the value of many-year averages. If we consider that the aridest period 1830's and 1840's, recorded by instrument/tool observations reflects the occurence of cycles of secular trend of precipitation and can be repeated, then for obtaining the stable many-year 1 average value it was necessary to increase the length of series/row at least of up to 150 years. The at present existing series of observations of the amount of precipitation yet did not achieve this length; therefore it is necessary to be limited to smaller period, utilizing entire series/row of the available observations from 1891 through 1965. The single calendar period of the averaging of data on the precipitation does not have high value

for the territory of the USSR, since secular trend of precipitation in different parts of the vast territory of our country is not synchronous. The comparability of the average values of precipitation much more affects the length of the period of observations, than its calendar unity. For the evaluation of the period accepted and for the characteristic of the variability of precipitation is given the comparison of the average values of precipitation during the decennial periods (Table XX).

It is evident from table XX that averages from decennial series of observations are unstable.

Table XX. Average/mean monthly total precipitation, calculated in separate decades, in % from the average values for the years 1936-1965. Dolinovka.

(1) Годы	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	(2) Год
1936—1945	85	96	94	69	72	63	83	108	110	83	114	82	91
1941—1950	75	99	76	70	97	87	112	84	108	78	87	120	96
1946—1955	91	107	97	148	97	111	100	84	101	87	104	125	70
1951—1960	129	132	126	124	69	101	92	105	75	89	98	107	101
1956—1965	122	97	97	126	134	126	106	107	89	128	85	84	107

Key: (1). Years. (2). Year.

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For example, in the moistest decade (1946-1955) average monthly amount of precipitation during April composes 148% of the norm, and in driest (1936-1945) - [illegible], i.e., averages from the decennial series/row differ to 79%.

Variability of average monthly values, obtained from decennial series/rows, is visible also in Fig. 27. The annual variation of the precipitation substantially is distorted due to the brevity of the period of observations: the months of maximum and minimum precipitation are displaced, the evenness of annual variation is disrupted. Averages of the larger period, for example, thirty-year, are considerably more stable than averages from the decennial series/row, although they are not completely stable.

Table 1 gives data of short series of observations as far as possible to many-year period by method of relations. In the case of the impossibility to carry out bringing to the fundamental period of

1891-1965 due to the wide-spaced network of stations, data of stations with the short series of observations are led to the longer, although more incomplete period (25-30 years). For a number of reasons (different accuracy of the measurement of liquid and solid precipitation, closer correlation between seasonal total precipitation of adjacent stations in comparison with the monthly) the bringing to the many-year period by the method of relations is fulfilled not for the separate months, but for total precipitation during the cold and warm periods of year. The monthly amounts of precipitation of short-series/short-row stations are calculated by the percent ratios of monthly total precipitation to total precipitation during the cold and warm periods, calculated according to the data of supporting/reference stations (method isomer). The percent ratio of the precipitation of cold period to the precipitation during the warm period, designed on the base net of stations and posts, is utilized for calculating the precipitation of the cold period a) in the points/items, on which the observations during the cold period are rejected as low-grade, and b) in the points/items, where total precipitation are substantially understated as a result of the open location of stations and high wind velocity. In this case yearly total precipitation during winter period can be incomparable with the many-year average value, designed on the isomers.

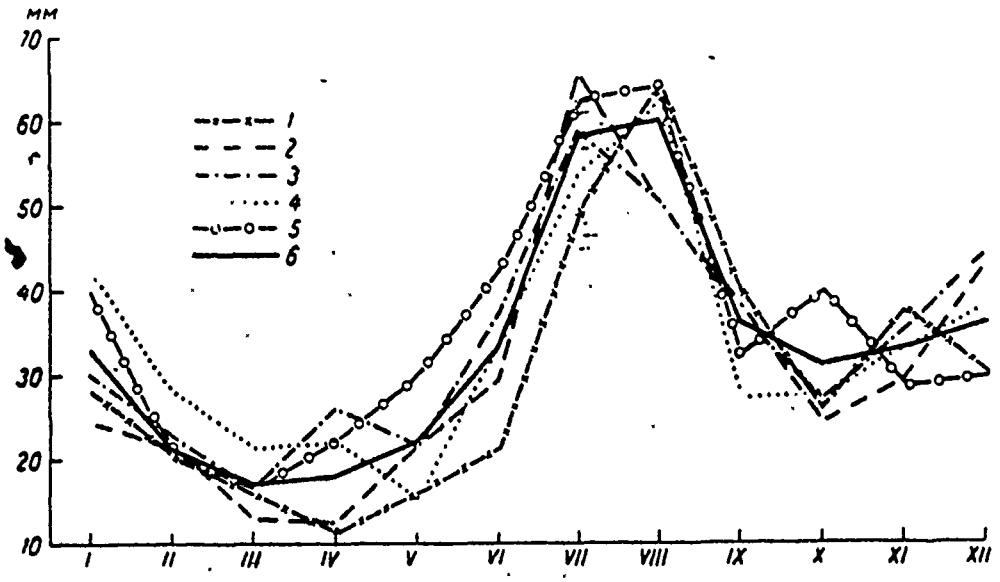

Fig. 27. Annual variation of amount of precipitation according to data in separate decades. Dolinovka. 1 - 1936-1945; 2 - 1941-1950; 3 - 1946-1955; 4 - 1951-1960; 5 - 1956-1965; 6 - norm.

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The correct measurement of precipitation is very hindered/hampered in the coasts of Kamchatka in the conditions of high wind velocities. The method isomer is used very widely because of this for obtaining total precipitation during the cold period. Total precipitation, designed on isomers, are printed in tables 1 and 1a by italics. Are so isolated total precipitation of the series/row of the stations, for which the values are obtained by calculation during the period of the observations of 10 years and less. The annual variation of precipitation for such stations is determined insufficiently reliably.

Replacement of rain gage with protection of Nipher to

precipitation meter of Tret'yakova in 1950's introduced refinement in measurement of solid precipitation. But in this case the problem of connecting/fitting series of observations in two instruments arose. It is realized by introduction of corrections to total precipitation during the period of pluviometric observations.

Under conditions of Kamchatka readings/indications of rain gage differ significantly from readings/indications of precipitation meter. The points, located along the West and East coasts, are opened from the direction of sea and subjected to the effect of high winds. Average wind speed during the period with solid precipitation in the West coast are equal to 5-7 m/s, on eastern 5-9 m/s. Coefficients for connecting/fitting of pluviometric series with precipitation-measuring are equal: for West coast 1.6-1.8, for eastern 4.0. This high value of coefficients is connected with the fact that at wind velocities of more than 5-6 m/s into the precipitation meter are thrown so-called "false precipitation". In this case it is not possible to use conversion factors from one instrument to another. Therefore for the stations Apuka Korf, Nicol (Is. Bering), Semlyachiki during the cold period in Table 1 are undertaken only observational data on the precipitation meter. In Table XXI the norms of precipitation on the rain gage and the precipitation meter for the months of the cold period of year are given. At the stations Petropavlovsk, beacon, Lopatka, cape with wind velocity during the cold period of more than 6 m/s the amount of precipitation in Table 1 is designed on the isomers st. Petropavlovsk, city I. The norms of precipitation during the cold

period on st. Petropavlovsk, beacon and Lopatka, cape should be considered tentative.

In connection with the fact that in coasts wind velocities are considerable not only in winter, but also in summer, in series/row of points was noted substantial difference in readings/indications of rain gage from readings/indications of precipitation meter and in measurement of liquid precipitations (Petropavlovsk, beacon, Bering's island). The difference in the readings/indications reached 20%.

In special position valley region of Kamchatka is located, shielded by mountains from west and east.

Table XXI. Comparison of average amount of precipitation on the rain gage and the precipitation meter.

(1) Станция	(2) Период наблюдений	(3) Вид прибора	(4) Количество осадков (мм)				
			XI	XII	I	II	III
(5) Апука	1945—1953	Дождемер (6)	23	11	21	6	7
	1953—1965	Осадкомер (7)	38	48	69	42	46
(8) Корф	1947—1951	Дождемер (6)	3	14	40	13	16
	1951—1965	Осадкомер (7)	34	39	43	15	27
(9) Никольское (о. Беринга)	1935—1950	Дождемер (6)	56	32	23	16	18
	1951—1965	Осадкомер (7)	79	59	61	35	43
(10) Семлячики	1935—1953	Дождемер (6)	88	58	41	30	41
	1953—1965	Осадкомер (7)	105	156	130	66	93

Key: (1). Station. (2). Period of observations. (3). Type of instrument. (4). Amount of precipitation (mm). (5). Apuka. (6). Rain gage. (7). precipitation meter. (8). Korf. (9). Nicol (Is. Bering). (10). Semlyachiki.

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Here the average speeds during the period with solid precipitation do not exceed 4 m/s, and the difference in readings/indications of two instruments is small. In contrast to the coasts, in summer in the valley wind velocities are low, and the temperature of air is sufficiently high and can exceed 20°. In this case the ratio of total precipitation on the precipitation meter to total precipitation on the rain gage is equal to 0.95-0.97, i.e., the measurement of liquid precipitations by precipitation meter is under such conditions made less accurately than on the rain gage. This is explained by large losses to the wetting and the evaporation in the precipitation meter.

Values of scaling factors depending on average monthly wind velocity at height/altitude of weathervane and conditions of protection of weather station site is brought in appendix to tables 1 and 1a. The protection of instrument platform from the wind is characterized by three types: I - shielded, II - partly protected, III and IV - opened. These types are the qualitative characteristic of the vulnerability of instrument from the wind and are determined according to the physicogeographical descriptions of stations and posts.

As can be seen from appendix, even under conditions of identical protection at one and the same wind velocity in separate areas of coefficient domain of conversion of precipitation are different. This can be explained by different character of precipitation, i.e., by that portion, which the low-intensity part of the precipitation in comparison with its total number composes (Table XXII).

Data for this table are acquired on the basis of recordings of pluviograph for 1966. It is evident from table XXII that the smallest portion of low-intensity precipitation are noted in the mountain valley (Pauzhetskiye Klyuchi) due to the frequency of shower precipitation, and greatest in the East coast due to large frequency of the efflux of the moist warm air masses of air from the ocean and drizzle.

At some stations and posts decrease of precipitation during cold

period is determined not so much by effect of local conditions on formation of precipitation, as by errors in their measuring, connected with open installation of instrument. By this example can serve as st. Petropavlovsk, where for 10 years were conducted observations on the precipitation meter, established/installed on that opened to cape, also, under the shielded conditions among the structures. On the precipitation meter on to cape in the cold period is observed precipitation 1.6 times, in the warm - 1.2 times less than in the place (Table XXIII).

Data of this supplementary shielded area/site are placed in Tables 1, 1a by the name Petropavlovsk, city II. Data of st. Petropavlovsk, city I most correctly reflect real amount of precipitation in the cold period, than other stations in this area (Petropavlovsk, city II and Petropavlovsk, beacon). Average wind speed during the cold period at this station is comparatively small, only 2.9 m/s (on st. Petropavlovsk, beacon 9.3 m/s). Therefore the precipitation meter, installed on st. Petropavlovsk, city I had smaller errors of measurement of precipitation.

Relationship/ratio of total precipitation during warm period, measured by precipitation meter under varied conditions of protection, gives grounds to make conclusion that for points, located in open capes and coasts, total precipitation during warm period are reduced by 20-25%.

Table XXII. Average/mean ratio of total precipitation with an intensity of 0.04 mm/min to total total precipitation in the month.

(1) Район	(2) Отношение (%)
(3) Западное побережье . .	60—70
(4) Восточное побережье	80—100
(5) Долина р. Камчатки . .	60—70
(6) Север области	80
(7) Горная долина юго-запада полуострова Камчатка	40
(8)	

Key: (1). Area. (2). Relation (%). (3). Western coast. (4). East coast. (5). Valley region of Kamchatka. (6). North of region. (7). Mountain valley of southwest of peninsula. (8). Kamchatka.

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Besides this, in different areas of Kamchatka (Mil'kovo, Ust'-Kamchatsk, Ust'-Bol'sherstsk, Petropavlovsk, beacon) readings/indications of precipitation meter in warm season were compared with readings/indications of precipitation meter, whose receiving surface was located at ground level. The difference in total precipitation, measured by two instruments, on the average composes 3-5%. Thus, "hole" precipitation meter gives precipitation to 3-5% more.

Placed in Table 1 average/mean many-year total precipitation, led to readings/indications of precipitation meter, i.e., instrument norms of observed precipitation, should be considered fundamental characteristic of amount of precipitation. These data should be used for solving the problems, where yearly values in the comparison with

the many-year are utilized. They must be assumed as the basis of the yearly maps/charts of the anomalies of rainfall distribution in the percentages of norm, evaluation of the security of one or the other observed value, etc. One should however consider that although the observed values are utilized in practice for many years, they are substantially less than the actually falling precipitation due to the inadequacy of instruments and their installation, and also due to the absence of the account of the horizontal precipitation, which are especially essential for the afforested slopes of mountains, opened to the moisture-bearing flows.

Since readings/indications of precipitation meters for a number of reasons are systematically underestimated in comparison with actual quantity of falling precipitation (especially in southern part of west and in East coast, where solid precipitation drop out with very high wind), for solving series/row of national economy and scientific questions, in Table 1a for each point are given those refined by calculating total precipitation, in which are taken into consideration basic errors of precipitation meter. Thus, data of Table 1a are total precipitation, corrected by corrections for the wetting of precipitation-measuring bucket and the wind insufficient consideration of precipitation. These data can be utilized for the aqueous-balance calculations, in which is required connecting/fitting precipitation with the runoff and the evaporation, and also with the mapping of average amounts of precipitation. Corrected total precipitation should be considered as the attempt to draw nearer the measured

quantity a true quantity of dropping out vertical precipitation according to the data at the moment/torque of publishing the handbook. A question about the determination of a total quantity of dropping out precipitation at present not for all areas is resolved with a sufficient accuracy and is subject to refinement, especially for the coasts, where solid precipitation drop out at high wind velocities. The statistical calculation of rainfall distribution in separate years and months will require an even larger storage of material of observations. Therefore at present it feels for the different targets to utilize both norms of precipitation, given in the handbook.

Table XXIII. Comparison of total precipitation under the conditions of the open and shielded types of the installations of precipitation meter (mm).

(1) Станция, местоположение	I	II	III	IV	V	VI	VII	XIII	IX	X	XI	XII	XI—III	IV—X
(2) Петропавловск (на мысу)	72	31	45	47	78	43	98	72	63	98	81	80	309	500
(3) Петропавловск (среди строений и деревьев)	133	47	86	90	111	48	106	76	74	116	112	127	505	620

Key: (1). Station, location. (2). Petropavlovsk (on cape). (3). Petropavlovsk (among structures and trees).

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For the stations, which have in winter wind velocities is more than 6 m/s, it is impossible to correct total precipitation, measured on the precipitation meter. The attempt to utilize the isomers, designed according to the data of adjacent stations with the lower speeds, for this purpose led to the unjustified distortion of the annual variation of precipitation. In table 1a such stations either are not placed entirely or are placed only the months of warm period, in which wind velocities did not exceed 6 m/s. These stations are noted by asterisk (*).

For obtaining average/mean many-year norms of precipitation, led to readings/indications of rain gage (for example, for comparison with norm of yearly observations on rain gage given during period), data of Table 1 it is necessary to divide into conversion factor from readings of rain gage to readings/indications of precipitation meter (Appendix to Tables 1 and 1a of Section 2).

In territory in question, elongated from north to south, it is possible to isolate several areas, which have different periods with solid precipitation. In the southern part of the West and East coasts, and also on the Komandorskiye Islands the period with solid precipitation lasts from December through March, in the valley region of Kamchatka and northern part of the peninsula - from November through April. The largest period with solid precipitation is observed on the north of the region, where it lasts 7 months (from October through April). Superiority of summer precipitation over winter is considerably more in the West coast and almost is absent from east. The winter, usually dry in the continental areas with monsoon climate, is changed by moist on the protruding into the ocean parts of the continent and the islands, where the excess of summer precipitation becomes insignificant.

Rainfall distribution along territory depends not only on general-circulation factors, but also on underlying surface. A great effect on rainfall distribution have the height/altitude of place, the form of relief, the presence of forests and river valleys, the proximity of enormous water spaces. The effect of relief, forest and water surface is connected with uplift and subsidence above the elements of relief and change of the airstream turbulence in the dependence on the roughness of the underlying surface. As a rule, in the elevated sections precipitation increase, in the lower - they decrease. The maximum of precipitation usually falls to windward

slope or peak of elevation or mountain. The effect of windward slope is spread also in the adjacent plain, so that an increase in the precipitation sometimes begins even before uplift of terrain. From the lee side of elevations and mountains is observed, on the contrary, the decrease of amount of precipitation, the so-called "rain shadow". In the areas of large basins and river valleys, in the flat/plane maritime coasts the amount of precipitation also decreases. These laws in the rainfall distribution should be considered during interpolation of data to the territory, not illuminated by observations.

Predominance of specific synoptic processes and effect of local physicogeographical conditions create their special features in rainfall distribution in different areas of Kamchatka. Amount of precipitation can considerably differ even on the closely spaced points, which are found under varied conditions of protection. In the valley region of Kamchatka both in winter and in summer the amount of precipitation increases in the place of the contraction of valley, and decreases in its center section, where the valley is wider. So in the cold period amount of precipitation varies from 260 mm in Klyuchi to 140 mm in Dolinovka, and then increases at st. Pushchino to 390 mm. Pushchino station is located in the draft of the valley region of Kamchatka.

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This location contributes so that the aggravation of the fronts occurs

upon the intrusions of moist warm air masses from the sea into Pushchino area and falls more precipitation, than in the more northern areas.

On northwest of peninsula st. Chemurnaut occupies special location, different from more southern stations Ust'-Lesnaya and Ust'-Palana. The narrow low band of West coast, along which are located these two stations, is isolated from the East coast by median ridge/spine - comparatively high mountains. With the steadying of cyclones in the Bering Sea these mountains impede the penetration of moist air masses in the West coast into cold half of year. As a result in winter of precipitation is here less than in Chemurnaut, to the southeast from which is located Parapol'skiy valley, which does not impede the penetration of cyclones into the area of Penzhinskiy gulf during their motion from the Karaginskiy or Olyutorskiy bays. This baric situation and orography of terrain causes precipitation of considerable amount of precipitation in Chemurnaut.

With st. Preobrazhenskiy precipitation is recorded almost two times more than on st. Nicol, although they are located not far from each other on Komandorskiye Islands. This is explained by a considerable difference in the environmental conditions in the area of these stations, which determine the type of the protection of precipitation meter. In Preobrazhenskiy the precipitation meter has the partly protected type of the installation (mountains surround instrument platform from three sides of the horizon). On st. Nicol

the precipitation meter is installed at open place and is subjected to the action of high winds, especially in cold half of year.

As striking example of effect of form of relief on amount of precipitation can serve Pauzhetskie Klyuchi, located at height of 155 m in narrow mountain valley 35 km from sea. Total precipitation in the year in the Pauzhetskie Klyuchi exceeds 2500 mm, and in the coast (Ozero) is only 725 mm. This is explained by the following reasons. Ascending air motion appear or are amplified from the windward side of mountains. The supplementary reasons for the intensification of the ascending motions is contraction, sharp rotation of valley and abundance of the thermal sources, which warm the lower layers of air in the area of Pauzhetskie Klyuchi. The reasons indicated contribute to the formation of cloudiness and to the precipitation of orographic precipitation.

Beginning with 1962, in Petropavlovsk is installed experimental model of precipitation meter with vertical receiving surfaces, oriented along sides of horizon/level. The observations of liquid precipitations are conducted on it. The comparison of monthly total precipitation, measured from different receiving surfaces, showed that the greatest amount of precipitation is noted in that sector, which is oriented towards the prevailing wind direction.

Data of precipitation meters with vertical receiving surfaces in combination with prevailing wind directions are useful for design.

Table 2. solid, liquid and mixed precipitations in the percentages of total number. Data of this table characterize the intramensual relationship/ratio of solid, liquid and mixed precipitations. The amount of precipitation of different forms serves as supplementary characteristic to the total amount of precipitation. The isolation/liberation of the portion of the precipitation of each form is especially important into the transfer seasons, when the intramensual relationship/ratio of precipitation sharply is changed. A quantity of solid, liquid and mixed precipitations is given on the months and in the year in the percentages of total monthly and annual amount of precipitation.

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Recordings of visual observations of form of precipitation are used for compilation of table. At the meteorological stations of the USSR, beginning with 1936, regularly are noted different forms of precipitation both between the periods and within the basic periods of observations (1, 7, 13 and 19 hours). That qualitative characteristic of atmospheric precipitations makes it possible to isolate days with precipitation only of liquid or solid precipitation, and also days with the mixed precipitation, when dropped out solid and liquid precipitations, and wet snow. All calculations are produced in a mechanized manner.

In Table 2 are placed data of 22 stations with series of observations predominantly in limits of period of 1936-1960. The

selection of this period is connected with the fact that the punch card library in essence is only since 1936. Data of st. Petropavlovsk, city I, calculated from the period of the observations of 10 years, follows to consider it tentative.

If in given month amount of precipitation of any form is equal or less than 0.5%, then in Table 2 instead of significant place is placed sign - a point (•). Since data of the amount of precipitation of different forms, measured on the rain gage and the precipitation meter, serve as basis for Table 2, then for connecting/fitting of data of this table with Table 1 the corresponding corrections for the elimination of the heterogeneity between the series/rows of pluviometric and precipitation-measuring observations are introduced.

As a result of the fact that period of observations in Table 2 (and also in Table 9) used is not sufficiently to prolonged, at separate stations they occur for lack of smoothness in annual variation of data of characteristics. Thus, in Table 2 on st. Kamenskoye during December liquid precipitations are noted by sign - a point (•), and during November they are absent entirely. With an increase in the period of observations the data of Table 2 and 9 will be refined.

According to data of Table 2 it is possible to reveal some special features in distribution of amount of precipitation of different forms in basic climatic areas of region. In the East coast

solid precipitation compose 45-60% of an annual quantity, while in the West coast the portion of solid precipitation noticeably less composes 30-40%. In the center section also on the extreme north of region solid precipitation compose 50-55% from the total number in the year.

If in East coast liquid precipitations are observed in 30-45% of annual quantity, then in West coast they compose 50-55%. In the center section also on the north of region the percentage of liquid precipitations is equal to 40-50.

From January through March on Komandorskiye Islands are observed from 1 to 4-5% of liquid precipitations. At this time of year 2-4% of liquid precipitations is noted also at other stations of East coast (Africa, cape, Ust'-Kamchatsk). And in the valley region of Kamchatka during January, February and March liquid precipitations are absent in the West coast or is observed an insignificant quantity (from tenths to 1-2%). Comparatively many liquid precipitations fall on East coast at the end of the autumn and principle of winter. For example, during November on the northeast (Korf, Apuka) and West coast liquid precipitations are from 1 to 13% of annual quantity and 20-40% on the southeast and the Komandorskiye Islands, and during December respectively 1-5 and 8-9%.

In northern part of West coast during December liquid precipitations are noted not each year, while in southern part they compose 2-3%.

Portion of mixed precipitation oscillates from 10 to 19% in both coasts and from 5 to 10% in central and northern parts of peninsula.

During cold period in territory in total amount of precipitation in question basic portion (more than 50%) are composed solid precipitation.

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Moreover, at this time on the southeast of peninsula and on the Komandorskiye Islands the portion of solid precipitation is changed in limits of 70-98%, in the center section of the peninsula composes 80-100%, and on northwest and northeast 60-90%. A maximum quantity of solid precipitation falls on February - March and composes 80-100% throughout entire territory. During May the portion of solid precipitation is reduced due to an increase in the mixed precipitation, which compose 50-80% in northern part of both coasts and they decrease in the southern part of the peninsula and on the Komandorskiye Islands to 15-30%.

Data on 22 stations given in Table 2 completely reliably characterize intramensual relationship/ratio of precipitation in entire territory of Kamchatskaya district. If necessary to obtain the information about the relationship/ratio of the forms of precipitation for the point, which is absent in Table 2, it is possible to use data of the nearest station, which is located in the similar climatic

conditions.

Table of probabilistic characteristics (Table 3-6). In the territory in question monthly total precipitation are characterized by large variability from year to year, and their average values do not present this element with a sufficient completeness. For example, on st. Ozero, where the many-year average amount of precipitation during February is equal to 47 mm, during February 1953 fell out only 10 mm of precipitation, while during February 1955 monthly total of precipitation was 174 mm. Therefore besides the average values of precipitation (average/mean monthly, seasonal and annual sums) in this section of handbook are placed monthly amount of precipitation (Table 3, 4) and daily maximum of the precipitation (Table 5, 6) of different security on the months and in the year.

Probabilistic characteristics of precipitation are designed with the aid of widespread method of curves of total probability, or curves of security. By security should be understood the probability of values above or lower than the specific limit. For example, if on st. Uka annual total precipitation by security with 2% is 800 mm, then this means that on the average of 1 time in 50 years in the year falls precipitation 800 mm and more. But if annual amount of precipitation by security with 80% at the same station is 392 mm, then this means that 1 time in 5 years in the year falls precipitation 392 mm and less (but in four years of five total precipitation is equal or exceeds 392 mm).

As initial material for calculating security of both monthly amount of precipitation and their daily maximum, serve yearly data. They are arranged in the series/row in the decreasing order so that the maximum value proves to be in the beginning of series/row, and smallest - by latter. Each term of series/row is labeled from 1 to n, then is calculated his total probability (security) by the formula

$$P = \frac{m - 0,3}{n + 0,4} \cdot 100,$$

where P - security of the term of series/row in the percentages, m - the ordinal number of the term of series/row, n - the total number of years of observations.

On values of P and corresponding to them amounts of precipitation or daily maximums are plotted a curve of security. For their construction are used the special forms of "Cellulose of probabilities", which serve for the rectification of the curves of security. These celluloses make it possible to extrapolate data for the period, greater than actual series of observations.

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Example to probabilistic curve of amount of precipitation in August is given in Fig. 28.

Table 3. Greatest and smallest monthly and annual amount of precipitation (mm) of different security. This table depicts the greatest amounts of precipitation of different security for the

separate stations. For example, for the greatest amount of precipitation probability 2, 5, 10%, means that the precipitation were observed 1 time in 50, 20 and 10 years. In the table are placed the data of 12 stations, majority of which has a period of observations about 30 years and more, and only Apuka and Ozero for 21-22 years. Due to the shorter series of observations for two stations indicated the information according to this characteristic of precipitation is tentative.

Table 3 gives total precipitation of different probability to readings/indications of placed precipitation meter. Observed the maximum and the minimum are given according to actual data, and if were noted before the replacement of instrument, then were given to readings/indications of precipitation meter. Due to the large correction in the winter months ($K_1 \geq 4.0$), which is inaccurate, data of st. Apuka are placed only during the period with liquid precipitations.

Security of greatest amount of precipitation means that 1 time in corresponding period of years can be amounts of precipitation, equal either more value indicated, and for smallest quantities - equal or less value indicated.

Annual variation of amount of precipitation of different security can not coincide with annual variation of their quantity, placed in Table 1. However, general laws governing the change in the amount of

precipitation from one season to the next at the stations are retained. For example, on st. Sobolyev the annual variation of the greatest amount of precipitation by 10% of security will be coordinated with the annual variation of average amount of precipitation (Table 1): during February is observed the minimum of precipitation, and in summer (during August) and in autumn (during October) - maximum. In a change in the amount of precipitation of different security on the territory the picture, analogous to a change in the average amount of precipitation is observed (Table 1, 1a).

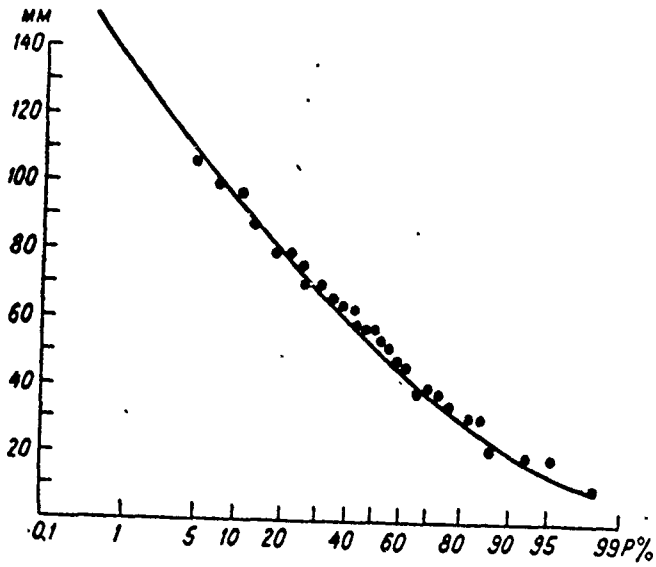

Fig. 28. Curve of security of monthly amount of precipitation. Ust'-Kamchatsk. August.

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For example, in Sobolyev, located in West coast of Kamchatka, coast area south of Ust'-Khayryuzovo, according to table 1, monthly falls larger amount of precipitation, than on st. Ust'-Khayryuzovo. The greatest and smallest amount of precipitation of that or other security (in table 3) is also more in Sobolyev, in comparison with Ust'-Khayryuzovo.

Table 4. the monthly and annual amounts of precipitation of different security. As basis table 4 are assumed the same data, as in table 3. The generalized in an above-indicated manner data on the separate points serve as basis for nomograms (Fig. 29). On the nomograms are represented the amounts of precipitation of different

security in the dependence on their average quantity on the seasons. From them it is possible to remove/take the amount of precipitation of different probability for the months, entering this season.

As basis for Tables 4 served data of 21 stations within period more than 25-30 years. The absence of the necessary quantity of points with the long series of observations did not make it possible to produce the zoning of the territory of UGMS [УГМС - Administration of the Hydrometeorological Service], which affected the accuracy of total precipitation of different security. With the assigned average values of error in monthly and annual total precipitat ` of different security reach ±10%, and in certain cases ±15%. Especially large errors are characteristic for the data in the winter months. Due to the short series of observations in table are not included total precipitation st. Pauzhetskiye Klyuchi, on which the amount of precipitation greatest in Kamchatka is recorded.

They show data of Table. 4, from what sums and what re[illegible] are added average monthly amounts of precipitation.

In Table XXIV it is shown, from what sums can store/add up average monthly amount of precipitation during October, equal to 100 mm, in territory of Kamchatka UGMS.

It is very dry with norm 100 mm in one years, and - it is very rainy into others. In some 5% of years (5-percent security) monthly total precipitation are 189 mm and more, in other 5% of years - do not exceed 30 mm.

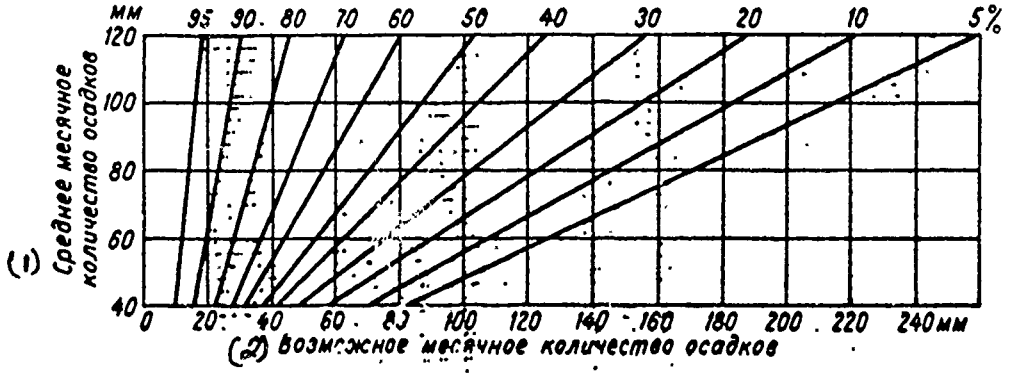

Fig. 29. Nomogram for calculating monthly total precipitation of different security. July.

Key: (1). Average monthly amount of precipitation. (2). Possible monthly amount of precipitation.

Table XXIV. Average monthly amount of precipitation (mm), possible in the separate years. October.

(2) Норма (мм)	(1) Обеспеченность (%)										
	5	10	20	30	40	50	60	70	80	90	95
100	189	157	133	120	108	97	88	77	65	47	30

Key: (1). Security (%). (2). Norm (mm).

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Monthly total of precipitation from 77 mm are provided in 70% of years and more, in remaining 30% of years are less than 77 mm. Thus, is possible to reveal the structure of series of observations and to calculate entire by the possible of total precipitation and their frequency.

Table 4 presents data, led to readings/indications of precipitation meter, but not corrected by corrections for wetting and for wind insufficient consideration of precipitation. The corrected norms of winter monthly and annual total precipitation considerably differ from those possessed fault. For some areas the corrected norms are equal to total precipitation of a 5-20-percent security, calculated according to the defective norms.

Table 5. Daily maximum of the precipitation of different security. Year.

Table 6. Daily maximum of the precipitation of different security on the months. The daily maximum of precipitation on the months and in the year is selected from the daily observations on the rain gage and a precipitation meter. Data on the daily maximum of precipitation are greatest total precipitation, which fell during the meteorological days (latter up to 1936 began from 7 of the morning, and since 1936 - from 19 hours of evening).

Maximum precipitation, selected in any 24 hours, independent of meteorological days (for example, on tapes of pluviograph) accepted, in number of cases can prove to be more than those, which are obtained according to observational data on rain gage and precipitation meter.

Information about daily maximum of precipitation has great

practical value. They are utilized for the hydrological and construction calculations (calculation of the maximum runoff of rivers, channelization in the cities, etc.), during the design of instruments and constructions, which work under the open sky, and for the solution of many other problems of national economy.

During data processing on daily maximum of precipitation for Tables 5 and 6 heterogeneity between series/rows of pluviometric and precipitation-measuring observations was not removed. For the summer, when the greatest daily maximum of precipitation most frequently is observed, this heterogeneity is not essential. But this does not relate to winter period for the stations of the open type, placed in Table 6. The daily maximum of precipitation due to high wind velocities in winter period can be considerably underestimated at these stations. To avoid the considerable heterogeneity of observations in the winter time for the stations of the open and half-open type of the protection of precipitation meter (Ust'-Bol'sherstsk, Uka, Ust'-Voyampolk, etc.) in Table 6 daily maximum of precipitation was not placed within the period with solid precipitation. In the northern areas (Ust'-Voyampolk, Apuka, etc.) this period is more (from November through April). Therefore for them Table 6 presents daily maximum for the period May on October. But in the more southern areas (Ust'-Bol'sheretsk, Petropavlovsk, beacon, etc.) period with solid precipitation is less; therefore for such stations data are placed for the period April on November.

In Table 6 is placed daily maximum of precipitation on months by security with 63, 20, 10, 5, 2, 1%, i.e., greatest amount of precipitation, exceeded once a one-and-a-half years, in 5, 10, 20, 50 and 100 years. For example, if during May on st. Kozyrevsk daily maximum by security with 10% is equal to 15 mm, then this means that 1 time in 10 years the greatest amount of precipitation in the days is 15 mm and more. Furthermore, in the table is placed middle daily maximum during entire period of observations. In the graph/count the "observed maximum" is placed the greatest daily maximum of precipitation in the given month, selected as entire period and the date (dates), when it was observed.

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In Table 5 only data of the shielded and partly protected stations, undertaken in Table 6 in all months of year, are placed.

In Table 6 data of 20 stations with period of observations from 24-25 years (Ozero I, Esso) to 28-30 years are placed, while sometimes it is more than 40-49 years (Ust'-Kamchatsk, Klyuchi). For the territory with the large variability of precipitation and the complicated physicogeographical conditions in question the length of period into 25-30 years is insufficient for calculating the rarely observed maximum daily amounts of precipitation.

Processing data of Table 5 and 6 consisted of plotting of curves of total probability for separate months and year on appropriate

maximums of precipitation. The values of the daily maximum of the specific security were removed/taken from the curves. The greater the series of observations, the more precisely the curve is conducted. Due to the insufficient length of series/row inaccurate is most frequently the conducting by curve in its upper part, for the values, which correspond to security with 2 and 1%. Therefore for all stations in Table 5 and 6 values of the daily maximum of precipitation, possible 1 time in 50 and 100 years, should be considered tentative.

For purpose of elongation/aspect ratio of series of observations data of several stations are united in one series/row under method of "hodostation". In Table 5 and 6 are united the data of the stations: 1) Apuka, Tilichiki and Korf, 2) Upper-Pejino and Slautnoye, 3) Mil'kovo and Mil'kovo agr. exp. st. the united points are located in the areas, uniform in the character of the daily maximums of precipitation. But the at the same time daily maximums of the united stations are not virtually connected, since they are most frequently the result of precipitation of the showers, which cover a comparatively small territory. Therefore into "hodostation" were placed daily maximums even in the identical years of observations. For example, in the united series/row of the stations Apuka, Tilichik and Korf entered data of Apuki and Korf within the period of 1945-1960. However, data of Mil'kovo agr. exp. st. (1935-1941) only supplement series/row st. Mil'kovo (1941-1965), since their readings/indications in the general/common years will agree well. In

Tables 5 and 6 for the united stations are placed the names that station, the period of observations at which is more.

In distribution of daily maximum of precipitation as amount of precipitation, there are following basic laws.

1. Increase in daily maximum with height/altitude along slope.

2. Dependence of its value from exposure of slope, namely: increase in daily maximum on open windward slope and decrease on leeward.

3. Sharp decrease of daily maximum of precipitation in internal mountain valleys.

As a whole distribution along territory of middle daily maximum of precipitation is analogous with distribution of average amount of precipitation in warm season. On the north of region, in the area the smallest daily maximum - 18-20 mm. In the West coast is noted in essence an increase in the middle daily maximum from the north to the south: from 28 mm in Ust'-Voyampolk to 41-44 mm on the southwest. In the valley region of Kamchatka, as for the amount of precipitation during the warm period, it is possible to note the decrease of daily maximum from the outskirts of valley to its central (the widest part) - from 32 to 24-26 mm. In the most moistened southeastern part of the coast of peninsula is isolated considerably larger than at other

stations, middle daily maximum. For example, in Petropavlovsk, city I it is 102 mm. The observed daily maximum of precipitation at this station is equal to 207 mm (November of 1939).

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Distribution of daily maximum of precipitation of different security is subordinated to law in distribution established/installed above of middle daily maximum. Thus, if on the north) (upper-Penjino, Slautnoye region the daily maximum of precipitation, exceeded once in 1.5 years, is equal to 17 mm, then in the southwestern coast is equal to 34 mm (Ozero). The daily maximum of precipitation in the West coast greatest in the year and in the valley is observed usually in summer (during July-August), in the northeastern coast - most frequently in autumn (in September-October) or in winter (during December, January or March). In the southeastern coast the largest daily maximum of precipitation is feasible both during July-August and in a September-November and March.

Table 7. Maximum precipitation intensity for different time intervals. year. Table 7 gives the information about the maximum precipitation intensity in different intervals of time (for 5, 10, 20, 30 min., and also for 1, 12, 24 hours), and in the second line - date of precipitation with the intensity indicated. Maximum precipitation intensity for the time intervals from 5 min. to 1 hour is obtained on the recorders of rains (pluviographs), and for determining the precipitation in the time intervals, are equal to 12 and 24 hours,

observational data on the precipitation meter were gathered (rain gage). Data to 1959 are undertaken from the collector "cloudbursts and daily amounts of precipitation for the years 1936-1959" (Gidrometeoizdat, Leningrad, 1963).

For determining greatest precipitation intensity from recordings of pluviograph were selected layers of precipitation in assigned intervals of time (5, 10, 20 min., etc.) greatest in year. Then maximum intensity was determined by dividing selected total precipitation into these time intervals. Maximum precipitation intensity for the time interval of 30 min. was obtained with the aid of the method of graphic interpolation. If for the time intervals 20 and 40 min. the date of the greatest precipitation intensity by one, then is given also for 30 min. (in brackets).

Table 7 presents data of 21 stations with observations on pluviographs from 3 to 26 years, i.e., in limits of period of 1936-1962. Were processed 474 rains. The period of observations used is insufficient for determining a maximally possible precipitation intensity. With the storage of observations during the more prolonged period the data of many stations can be refined in the direction of their increase. The values of the maximum intensity for the stations with the period of observations of less than 5 years should be considered tentative.

In Table 7 are placed united data of stations Petropavlovsk, city

I and Petropavlovsk, city II, and also Bol'sheretsk with Bol'sheretsk state farm, since in both cases data in maximum precipitation intensity are uniform. On st. Kozyrevsk state farm, arranged/located 40 km from Kozyrevsk, for the time interval 5 and 10 min., 26 July 1942 was noted rain of greater intensity, than in Kozyrevsk (0.54 mm/min).

Comparison of data of pluviograph during period of observations, used in Table 7, with data during more prolonged period, it is possible to make only in intervals of time 12 and 24 hours, i.e., in intervals, for which are utilized observations on rain gage and precipitation meter (Table XXV).

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It is evident from table XXV that in Sobolyev maximum precipitation intensity for intervals of time 12 and 24 hours, designed according to data during relatively small period of observations (7 years), is lower than intensity, designed during period of 26 years.

Data of Table 7 show that the greater duration of precipitation of rain, the less its intensity. This is explained by the fact that in the first gradations of the duration of rain (5, 10, 20 min.) fall predominantly shower precipitation. The latter, as is known, have the large intensity of precipitation with the small duration.

On the other hand, duration of precipitation 1 hour, 12 hours and more most frequently have deposits of continuous/lea character, for which maximum intensity is considerably less.

Basic number of cloudbursts falls on August, and at some stations (Kamenskoye, Korf, etc.) on July. The considerable frequency of showers during September is noted only at the stations, located in the southeastern part (Semlyachiki, Petropavlovsk, Yelizovo peninsula).

On the basis of data of Table 7 it is possible to draw conclusion that in West and East coasts maximum precipitation intensity increases from north to south. This is caused by the special features of atmosphere circulation into warm half of year, in particular, by more intense cyclonic activity above the south of peninsula. The largest intensity, which reaches 1 mm per minute and more, for the intervals of the time of 5 min., it is noted in the southwestern part of the peninsula (Lake), also, on southeast (Yelizovo, Nachiki).

Table 8. Number of days with precipitation of different value. For the more complete characteristic of the conditions of humidification of this area besides total amount of precipitation, it is useful to know, as precipitation frequently drop out and which their intensity, such as the frequency of large showers, rains of average/mean intensity and fine/small precipitation. Such information is necessary for the number of the branches of national economy, in particular for the agriculture and buildings.

Data of this table are many-year average number of days with precipitation on seven gradations, calculated by direct calculation. In the USSR in the precipitation day it is customary to assume such, when in the days fell 0.1 mm and more than precipitation.

Data of selective network of stations by larger part with series of observations of 20-30 years in limits of period of 1936-1965 are placed in table. Furthermore, for the little-known areas are cited the data of several stations with 15-year-old period of observations. For such points (Kamenskoye, Chemurnaut) into the table is placed the number of days with precipitation only for the first five gradations. Data of these stations should be considered tentative.

Variability on territory of number of days with precipitation by each of seven gradations individually is less than variability of total amount of precipitation. Therefore the limited number of stations is placed into the table.

Table XXV. Comparison of the maximum intensity of precipitation, obtained during the periods different duration. Sobolyev.

(1) Интенсивность осадков (мм/мин) для интервалов времени		(2) Период наблюдений
(3) 12 час.	(3) 24 час.	
0.06	0.04	1956—1962
0.09	0.06	1939—1965

Key: (1). Intensity of precipitation (mm/min) for the time intervals. (2). Period of observations. (3). hour.

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During use of data of this table it is necessary to keep in mind that into first graph all precipitation days enter, independent of their value, the second - everything, besides precipitation days is less than 0.5 mm, into third - everything, besides precipitation days are less than 1.0 mm, etc. The fractions less than one indicate that the precipitation of the corresponding value are observed not yearly.

After replacement of rain gage to precipitation meter at stations of open type of East and West coasts with wind velocities of in winter 6-7 m/s and more due to inflation of precipitation into precipitation meter occurred considerable increase in number of days with precipitation on all gradations. Within the period of observations in the precipitation meter most of all increased the number of days with precipitation ≥ 0.5, ≥ 1.0, ≥ 5.0 mm. Correction for connecting/fitting of series of observations in the rain gage and the precipitation meter according to this characteristic of precipitation is not introduced.

For this reason for the stations, at which is observed the considerable breakdown of the uniformity of series/row according to the number of days with precipitation, averages during the cold period in table 8 are calculated only according to the data of precipitation meter. Such stations include Apuka, Korf, Ust'-Voyampolk, Ust'-Khayryuzovo, Nicol (Is. Bering), Petropavlovsk, beacon, Ust'-Bol'sheretsk, Lopatka, cape. In table 8 they are noted by asterisk (*).

In table XXVI average number of days with precipitation on rain gage and precipitation meter for some of them is given. The series of observations at these stations are uniform during the warm period.

At such stations as Karaginskiy island, Uka, Icha, after replacement of instruments disturbance/breakdown of uniformity of series/row according to number of days of precipitation instruments breakdown of uniformity of series/row according to number of days with precipitation becomes apparent to a lesser degree and significantly does not affect change in average many-year values. Observational data of these stations during the cold period are placed in table 8 according to two instruments.

In Kamchatka number of days with precipitation during warm period (IV-X) in is essence more than during cold period of year (XI-III). With the greatest number of days with precipitation ≥0.1 by mm in the warm period in the West coast drops out larger amount of precipitation

(Table. 1). In series/row of stations of East coast (Petropavlovsk, city, Ust'-Kamchatsk, Storozh, bay, etc.) with smaller number of days with precipitation in cold period drops out larger amount of precipitation, than into warm, as a result of large frequency of strong snowfall. For example, in Ust'-Kamchatsk daily total precipitation ≥0.1 mm in the cold period are observed about 81 days, into the warm - 85 days. However, amount of precipitation during the cold period is more (351 mm in comparison with 319 mm for the warm).

In annual variation greatest number of days with precipitation ≥0.1 by mm in essence is observed in January-December: in East coast of 13-20 days and on Komandorskiye Islands of 24-25 days. In summer, during July-August the secondary maximum of the number of days with precipitation here is observed (13-16 days). In the West coast the principal maximum of the total number of days with precipitation falls in October-November (20-25), secondary maximum - on August (14-17) and third in the value maximum fits on April (about 15 days). In the valley region of Kamchatka principal maximum is observed in January-December, secondary - during July. The smallest number of days with precipitation ≥0.1 by mm in the entire territory is noted most frequently during June.

Table 8a. The number of days with the traces of precipitation. Data of this table serve as supplement to Tables 8, where placed is the number of days with precipitation, beginning with ≥ 0.1 mm.

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Table XXVI. Comparison of the average number of days with precipitation of different value according to two instruments.

(2) Месяц	(1) Число дней с осадками (мм)													
	(3) по дождемеру							(4) по осадкомеру						
	> 0.1	> 0.5	> 1.0	> 5.0	> 10.0	> 20.0	> 30.0	> 0.1	> 0.5	> 1.0	> 5.0	> 10.0	> 20.0	> 30.0
(5) Усть-Воямполка														
XI	16.2	11.2	8.4	1.2	0.1	0.0	0.0	19.4	16.1	12.6	2.4	0.3	0.0	0.0
XII	12.8	7.4	4.5	0.2	0.0	0.0	0.0	14.9	11.0	7.9	1.4	0.2	0.0	0.0
I	10.1	5.1	2.5	0.1	0.0	0.0	0.0	12.8	9.6	7.2	0.8	0.2	0.0	0.0
II	8.4	3.5	1.7	0.0	0.0	0.0	0.0	9.1	4.8	3.1	0.1	0.0	0.0	0.0
III	8.4	4.2	2.2	0.1	0.0	0.0	0.0	12.4	7.2	4.9	0.4	0.0	0.0	0.0
(6) Никольское (о. Беринга)														
XI	22.0	15.9	11.9	3.1	1.1	0.1	0.1	23.4	18.5	14.2	4.5	1.7	0.3	0.1
XII	22.4	14.8	9.3	1.7	0.6	0.1	0.0	22.7	17.7	13.1	3.7	1.1	0.2	0.0
I	22.5	12.8	7.7	0.7	0.2	0.0	0.0	24.7	18.3	14.4	3.5	0.7	0.2	0.1
II	20.8	9.8	5.0	0.5	0.1	0.0	0.0	21.9	14.7	10.7	2.1	0.4	0.1	0.1
III	20.8	10.8	6.3	0.2	0.0	0.0	0.0	23.5	15.3	10.3	2.0	0.6	0.3	0.1
(7) Лопатка, мыс														
XI	19.4	14.9	11.1	4.5	1.8	0.7	0.4	20.6	17.1	12.6	3.7	1.9	0.9	0.2
XII	15.4	8.7	5.8	1.4	0.1	0.1	0.1	23.7	18.9	14.1	5.5	2.6	0.9	0.1
I	14.7	8.4	5.4	0.4	0.1	0.0	0.0	22.0	17.5	14.7	5.6	2.9	1.3	0.5
II	11.7	6.5	3.8	0.4	0.1	0.0	0.0	16.8	13.1	10.1	3.4	1.5	0.6	0.4
III	14.4	7.5	4.6	0.9	0.2	0.0	0.0	20.8	16.0	12.6	4.6	2.1	0.9	0.0

Key: (1). Number of days with precipitation (mm). (2). Month. (3). on rain gage. (4). on precipitation meter. (5). Ust'-Voyampolka. (6). Nicol (Is. Bering). (7). Lopatka, cape.

In Table 8a is included the number of days with the traces of precipitation, i.e., such, when precipitation-measuring bucket is moistened by the fallen precipitation, but their quantity less than 0.1 mm. In the table are used the data of 22 stations, whose majority have series of observations in the limits of the period of 1936-1960. All calculations for this table are produced in a mechanized manner.

Number of days in year with traces of precipitation composes in West coast 19-21% of total number of days with precipitation, in East coast 23-28%, besides area st. Uka, island Karaginskiy and Komandorskiye Islands, where number of days with traces of precipitation composes 18-19%. In the valley region of Kamchatka a fraction of the number of days with the traces of precipitation in the total number of precipitation days oscillates in limits of 20-25%, and on the extreme north of region this portion is equal to 16%. In the transfer seasons the number of days with the traces of precipitation is considerable percentage of the total number of days with precipitation; moreover in spring this percent is higher than in autumn. In spring in the West coast the number of days with the traces of precipitation composes 23-29% of the total number of days with precipitation, in the East coast and in the valley region of Kamchatka the number of days is composed 35-38%, and in autumn respectively 10-20 and 20-30%.

Table 9. Number of days with solid, liquid and mixed

precipitations. Data of this table are the intramensual relationship/ratio of the number of days with different forms of precipitation and serve as supplement to data of Table 2 and 8. The basic treatment of material of this table is produced in a mechanized manner. In Table 9 the series of observations are used in essence in the limits of the period of 1936-1960. In it are represented the data of the same stations, as in Table 2. Data of this table are the many-year average number of days with solid, liquid and mixed precipitations, calculated by direct calculation for all months and year as a whole. Sign point (•) in any month means that the number of days with the fact or another form of precipitation is equal or less than 0.05.

It is necessary to keep in mind that total number of days with precipitation in this table can somewhat diverge from number of days with precipitation ≥0.1 mm in Table 8 due to difference in periods of observations used.

Since in Kamchatka winter prolonged and almost in entire territory greatest amount of precipitation dfalls into this half of year, number of days with solid precipitation is more than with other forms of precipitation. This is confirmed by data of Table 9. The period of precipitation of the mixed precipitation is entirely brief.

Greatest number of days with solid precipitation in West coast is observed most frequently during November, less frequent - during

December varies within the limits of 15-20 days. In the north of region and the East coast the maximum of the number of days with solid precipitation is observed during January or December and varies within the limits of 11-20 days. In the valley the maximum is observed in December-January and is 13-16 days.

Period of complete absence of solid precipitation in Kamchatka is brief. In the north, (KAMENSKOYe) region, the northeastern coast (APUKA), in the West coast (st. Icha) and in (Esso) mountains this period lasts only 2 months (July, August). in the remaining territory of East and West coasts, and also on the islands the period of the absence of solid precipitation continues in the course of 3-4 months.

According to data of stations, represented in Table 9, maximum of number of days with liquid precipitations fits on July or August, and in Tigil and Nachiki - on September.

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Moreover, in these months the number of days with liquid precipitations on the north of region amounts on the average to on 12 days, and in the south of West coast - 15-17 days. In the East coast the greatest number of days with liquid precipitations during July - August is equal to 13-17. If on the stations of the northern mainland part of the peninsula the period of the complete absence of liquid precipitations (in winter) is 4-5 months, and for the coastal 2-3 months, then at the insular stations and in the area of cape Lopatka

liquid precipitations can be observed during only year. The period of the complete absence of the mixed precipitation falls for the warmest summer months (July and August). The maximum of the number of days with the mixed precipitation is observed predominantly during October, it is less frequent - September or November.

As a result of special location st. Chemurnaut differs from other stations in terms of larger frequency of precipitation generally and in particular - days with solid precipitation. From November through March the number of days with solid precipitation in Chemurnaut on the average on 5-10 days is more than in Kamienski and Ust'-Lesnaya. As said above, are in winter in Kamchatka most frequent emergences/outcrop of cyclones along the trajectories, directed from the south, southwest to the north, the northeast along the West and East coasts. Therefore winter precipitation in Chemurnaut depends not only on the cyclones, which come out into the area of station along the West coast, but also often during their penetration through Parapol'skiy valley into the area of Penzhinskoy bay.

Table 10. Average and maximum duration of precipitation. Visual observations of the precipitation of rain and snow serve as initial material for obtaining the characteristics of the duration of precipitation. Such observations are conducted since 1936 with an accuracy to 15 min.

Was computed duration of rains, which give amount of

precipitation ≥0.1 mm. Materials of the selective network of stations in the limits of the period of 1939-1963 underwent working/treatment. The data about the duration of precipitation during the warm period (IV-X) for several stations are undertaken from A. N. Lebedev's book "Duration of rains in the territory of the USSR" [6], and during the cold period for all placed stations they are calculated according to meteorological tables. In the first line the average monthly duration of precipitation in all precipitation days is placed. Maximum duration (second line) is maximum value of all observed values. Average monthly values were obtained with the aid of the simple arithmetical averaging. Due to the difference in the periods not all they are equally precise.

In territory in question, which has large humidification, average/mean monthly values of duration of precipitation, calculated according to observations in 15-20 years and more, have error about 5-10%. Errors in the averages depend on the length of series/row and variability of phenomenon. Like amount of precipitation, duration of their precipitation are also sufficiently variable value. In particular, in the city Petropavlovsk in winter the duration of precipitation in the month can vary from 40-45 to 250-290 hour. This special feature is characteristic for other areas of Kamchatka.

On duration of precipitation Kamchatka relates to area of precipitation of prolonged precipitation. In the annual variation the greatest duration of precipitation on the majority of stations is

observed in December-January, and on the very southern tip, cape Lopatka - during July. At this time of year here, as in entire South coast of Kamchatka, predominate fine/small and drizzle, which have large duration. The smallest duration of precipitation in Kamchatka is observed during June or September.

Section 3. SNOW COVER.

Systematic observations of depth of snow cover employing single procedure were begun approximately since 1891. Observations were conducted on the rack, established/installed in the majority of the cases in the sections shielded from the wind, where there is no blowing away or inflation, and snow cover lies down evenly. In some observation points constant racks were established/installed in two sections - shielded and opened. After the 30-40's years many stations were transfered to the more open places, and depth of snow cover was measured on three constant racks. By 1935-36 was begun the new form of observations of snow cover - snow-graduated photography. They are conducted 1 time in the decade/ten-day period in three sections: "in the field", "in the forest under the crowns", and on the "clearings in the forest".

In this publication are placed average/mean many-year depth of snow cover from readings of constant racks from series of observations from 7 to 35 years (Table 1) and on snow surveying during period of 10 years and it is more.

Density stored up water in snow cover are brought according to data of snow surveying in essence within period not less than 10 years in limits of period of 1937-1965.

Dates of appearance, setting, destruction and descent of snow cover are determined according to visual observations in vicinities of station.

In connection with large variability in time of characteristics of snow cover and their considerable deviations from averages are led probabilities (security) of different depth of snow cover and dates of setting and destroying snow cover in separate years.

Observational data on constant racks are used for calculating probabilities (security), since series of observations on snow surveying insufficiently long.

More detailed information about separate characteristics, placed in tables of this section, and procedure of their obtaining is given in explanations to these tables.

Table 1. Average ten-day depth of snow cover on the constant rack. Table 1 depicts average/mean depth of snow covers on ten-day periods, greatest average/mean, maximum and minimum heights/altitudes for the winter. On the majority of the stations, placed in the table, daily observations of depth of snow cover in the open sections are used. When observations were conducted in the shielded and open sections, are placed data of both sections.

Average ten-day values are calculated from series of observations of different duration in limits of period of 1892-1965. At the stations, which have series of observations more than than 20 years, and also at the separate short-series/short-row stations (for example, Korf, Icha, etc.), where the bringing was impossible, averages were obtained by direct calculation. The data of short-series stations are cited to the longer series/rows the method of relations.

Averages from greatest ten-day depth of snow covers for winter are obtained via averaging of yearly maximum decade/ten-day heights regardless of the fact, to which month and ten-day period this maximum falls. Extreme values are selected from the maximum ten-day values during entire period of observations.

In connection with the fact that in separate years appearance and descent of snow cover are observed in different time, for decades/ten-day periods, into which snow cover was absent in more than 50% of winters, medium altitude is not calculated and in tables stands map symbol - point (•).

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Comparison of results of observations of depth of snow cover in open and shielded sections in table 1 showed that, as a rule, during winter height/altitude in open section is less than on that shielded.

According to graph of connection/communication between parallel

observations of depth of snow cover on constant racks in shielded and open sections (st. Dolinovka) is obtained conversion factor for from one type of section to another. It is equal to 1.24. The open section at this station has the lowered plane relief, the blowings away of snow in racks does not occur. The knowledge of this coefficient gives the possibility to calculate for the area of the valley region of Kamchatka, where there are observations on the constant rack only for the open section, approximate depth of snow cover in the shielded section, after multiplying height/altitude in the open section to the coefficient indicated.

As a result of nonuniformity of occurrence of snow cover in terrain, reading/indication of constant racks, especially in open sections, in majority of cases do not reflect conditions of entire area of station. The comparison of parallel observations on the constant racks and to snow surveying shows that depth of snow cover from readings/indications of the racks, installed in the open section, greater is partly less than on the snow surveying in the field. Nevertheless, data of the measurements of depth of snow cover on the constant racks widely are utilized, since the carrying out of observations in the constant racks differs in terms of greater simplicity and gives the possibility to trace the daily dynamics of depth of snow cover, which frequently is required in the practice.

At present accumulated series of parallel observations of depth of snow cover on constant racks and for snow surveying make it

possible to establish/install conversion factors from one form of observations to another.

When rack is located in shielded section, blowings away and inflations does not occur, snow lies down evenly from difference between readings/indications of constant racks and snow surveying virtually it is not detected. This uniform occurrence of snow cover is observed also in some open sections. Fig. 30 gives the graph of connection/communication between depth of snow cover, determined according to the constant racks and according to the snow surveying in the field. According to graph/curve the relation of depth of snow covers on the constant racks and the snow surveying comprises for the open section, where the snow lies down uniform to 0.97 (st. Mil'kovo).

During winter period occurs gradual accumulation of snow, and most frequently at the end of March - beginning of April, less frequent at the end of February in territory in question are observed maximum depth of snow covers. After reaching/achievement of maximum values snow cover decreases and converges. Snow melting in Kamchatka occurs intensely.

From comparison of average/mean depth of snow cover, determined according to constant racks during 30-year-old period of observations (since 1935) and in the last 10 years (1954-55) it is evident that into the latter/last 10-years at some stations is observed the

decrease of average/mean depth of snow cover (Table XXVII). This decrease is observed also at the Mil'kovo stations, Esso, Dolinovka, etc., which is connected with secular trend of depth of snow cover.

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Table 2. Depth of snow cover on the snow surveying on the last day of decade/ten-day period. The average values of depth of snow cover are calculated by the direct calculation of the results of snow surveying from the series of observations of different duration in the limits of the period of 1936-1965, but not less than 10 years. For the characteristic of snow cover in the little-known areas into the table are placed 15 stations with the period of the observations of 10-15 years.

Averages from greatest decade/ten-day depth of snow covers are obtained via averaging of maximum decade/ten-day heights in each year, regardless of the fact, to which month and decade/ten-day period this maximum falls. Extreme values (from the greatest decade/ten-day heights for the winter) are selected from the maximum decade/ten-day heights during entire period of observations. For the stations, which have series of observations less than 15 years, these data should be considered tentative.

On majority of stations, whose data are placed in Table 2, snow surveying were conducted only in field (on meadow). In the table are used also the data of snow surveying several stations "in the forest

under the tree tops" and "on forest clearings", where the corresponding sections are located at a distance not more than than 3 km from the station. Snow-graduated photography in the field (on to meadow) was conducted on the locked duct/contour in the form of triangle with the perimeter of sides not less than 1 km. The measurements of depth of snow cover were made through every 10 m with the total number of all measurements 100. Sections "clearing in the forest" and "in the forest under the tree tops" had an area not less than 1 ha. Snow surveying on them were conducted along 2-5 surveying lines by the total length about 500 m with distances between them not of less than 20 m. The measurements of depth of snow cover were made also through 10 m.

For decades/ten-day periods of beginning and end of winters, in which snow cover was observed not yearly, its medium altitude is not calculated and, if it is observed less than in 50% of winters, in tables is placed map symbol - point (•).

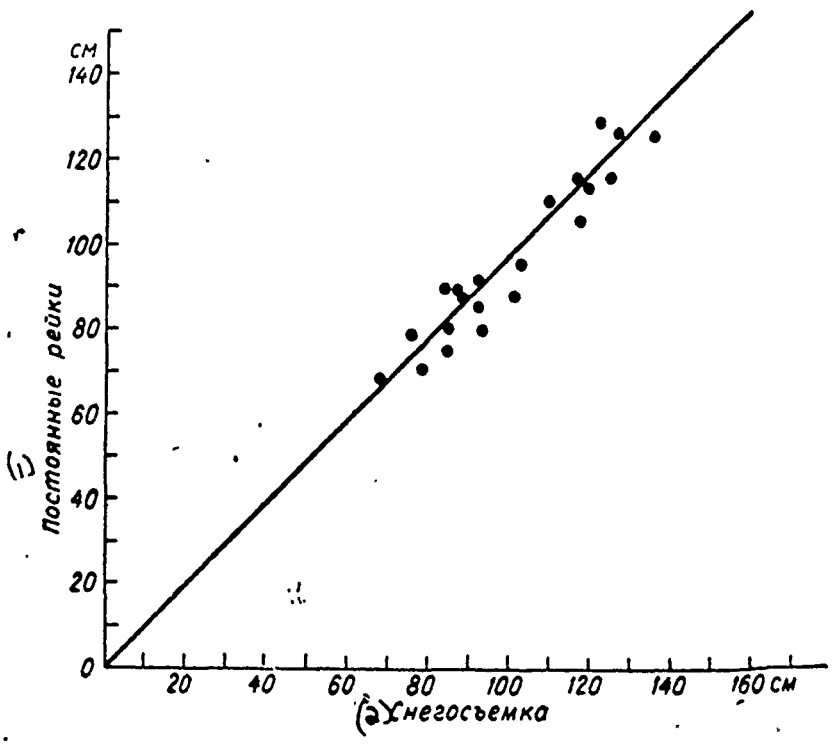

Fig. 30. Graph/curve of connection of depth of snow cover (constant rack - snow surveying). Partly protected section.

Key: (1). Constant racks. (2). Snow surveying.

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Depth of snow cover in forest depends on denseness of forest, species of trees, their age and other factors. From the comparison of depth of snow covers according to the data of snow surveying on the different land (open field, forest under the tree tops and forest clearing) and under the different conditions of relief and landscape is established the following: depth of snow cover in the forest under the crowns and on the clearing in the forest is more than in the field, if field is located in the little shielded from the wind

terrain, on the elevation, and the forest is young, where predominate the trees of the deciduous species, which detain by their crowns little snow (Fig. 31a, b). This relationship/ratio occurs in the sections, located in the coast or near it (st. Storozh, bay, Sobolyev). At the stations, located in the valley region of Kamchatka (Dolinovka, Mil'kovo), the wind effect is less, and the distribution of snow cover in the sections "in the field" are uniform. Forest in this area is mixed, average/mean denseness does not detain snow by crowns; therefore depth of snow cover and in the valley region of Kamchatka in the forest is more than in the field. Depth of snow cover in the forest is always more during the snow melting, since snow here melts more slowly than in the field.

In connection with the fact that on snow surveying are in essence series of observations of less than 20-25 years, in proportion to storage of material averages will require refinements.

At stations of southern part of West and East coasts, in center section of peninsula maximum of depth of snow cover falls predominantly on March (first-third ten-day period). In the northern part of the East and West coasts the maximum of depth of snow cover is noted more lately, most frequently during April (first, second ten-day period) or in the third (thinner/less frequent than second) ten-day period of March.

Table XXVII. Average decade/ten-day depth of snow cover during the different periods of observations.

(1) Период наблюдений	(2) Октябрь			(3) Ноябрь			(4) Декабрь			(5) Январь			(6) Февраль			(7) Март			(8) Апрель			(9) Май			(10) Участок
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
(11) Козыревск																									
1935—1944, 1945—1946, 1947—1959, 1961—1965	•	•	3	7	12	15	19	25	27	30	33	34	36	38	37	37	36	32	26	17	5	•	•	•	(12) Открытый
1954—1959, 1951—1965	•	•	2	6	10	16	17	20	21	22	26	29	31	30	29	28	26	22	17	9	1	•	•	•	
(13) Лопатка, мыс																									
1935—1939, 1940—1965			•	•	2	7	14	20	26	31	34	39	44	52	56	61	64	72	75	75	65	45	23	•	(12) Открытый
1955—1965				•	2	4	10	15	16	20	23	28	30	32	35	39	42	50	52	58	47	33	20	•	

Key: (1). Period of observations. (2). October. (3). November. (4). December. (5). January. (6). February. (7). March. (8). April. (9). May. (10). Section. (11). Kozyrevsk. (12). opened. (13). Lopatka, cape.

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Special feature of annual variation of depth of snow cover under conditions of Kamchatka is outlined well according to data of snow surveying. It consists in the following. On the majority of the stations of East coast, partially in the West coast and in the valley region of Kamchatka at the end of February - beginning of March is noted a certain decrease of depth of snow cover; in the East coast it composes 5-10%, while in the West coast and in the valley - from 1 to 5%. The decrease of depth of snow cover is explained by the character of atmosphere circulation above the peninsula at this time of year. During February in Kamchatka and Bering Sea ridge from Chukot usually is spread. The cyclones, which are displaced from Pacific Ocean along Kamchatka, are passed along the more southern trajectories, precipitation at this time falls little past Kamchatka. During

February on the majority of stations is noted the minimum of the amount of precipitation and number of days with precipitation (Table 1, 8 Section "precipitation"). As a result occurs the subsidence of snow cover - small decrease of its height/altitude. In first half of March ridge is destroyed, the number of cyclones, which come out to Kamchatka areas, considerably increases, amount of precipitation grows/rises, and depth of snow cover again increases.

Table 3. Density of snow cover on the snow surveying on the last day of decade/ten-day period. Table depicts the average density of snow cover on the last day of decade/ten-day period in g/cm^3.

Averages are obtained by direct calculation from series of observations of different duration within limits of period of 1937-1965.

Observations of density of snow cover conducted less regularly in comparison with height/altitude; therefore at some stations series/rows on density shorter. For such stations as Shipunskiy, cape, Pushchino, etc., are undertaken the periods of the observations of 10 years and more. The density of snow cover - value comparatively constant from year to year; therefore averages during the period of 10 years more make it possible to obtain sufficiently stable values.

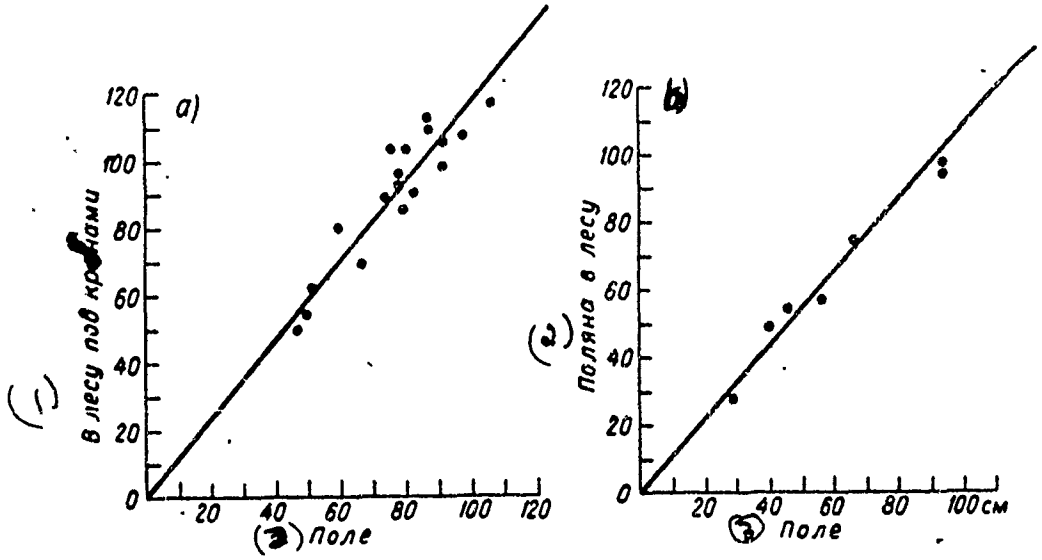

Fig. 31. Graph/curve of connection of depth of snow cover in sections: a) in field and in forest under crowns, b) in field also on clearing in forest.

Key: (1). In the forest under the taps/cranes. (2). Clearing in forest. (3). Field.

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If in the beginning or end of winter snow cover was observed less than in 50% of winters, then into appropriate decade/ten-day period instead of average density was set map symbol - point (•).

Determination of density during snow surveying is conducted within the same periods, on the same sections (in field, in forest under tree tops and on forest clearings) and surveying lines, that also depth of snow cover. Tests/samples to the density during the snow surveying are taken in the field through 100 m, in the forest and

on the forest clearing - through 70 m.

Density is taken into consideration of water supply in snow cover, furthermore, it has independent value for some branches of national economy. As is known, snow cover possesses the very low thermal conductivity, which is changed depending on its density - the thermal conductivity of snow is proportional to the square of its density. The greater the density, the higher the thermal conductivity of snow; therefore the condensed snow in the smaller measure protects soil from the cooling, which has high value for the agriculture, buildings, etc.

Density of snow cover from beginning of winter gradually increases also during snow melting it reaches its maximum values. Maximum in the values of density in the West coast and in the valley region of Kamchatka falls to third decade/ten-day period of April or first decade/ten-day period of May and it is from 0.30 to 0.39 g/cm^3. Maximum density usually is observed more lately in the East coast, in the second-third decade/ten-day period of May or the first decade/ten-day period of June and in the value is more than in the West coast (0.40-0.50 g/cm^3). Delay in the onset of the maximum of density in the East coast is connected with the later descent of snow cover, in comparison with the West coast.

Density of snow cover in sections "clearing in forest" and "in forest under crowns" somewhat less than in open field (on the average

on 0.01-0.02 g/cm³). This occurs because at the open places snow more greatly is condensed under the action of wind. Snow melting in the field occurs somewhat more intense, and snow density during this period in the field on 0.01-0.04 g/cm³ is more than on the clearing or in the forest under the tree tops.

Table 4. Water supply in snow cover on the snow surveying on the last day of decade/ten-day period. Table presents the average/mean water supply in snow cover on the last day of decade/ten-day period on the same stations, as density.

Averages are calculated by direct calculation of yearly data from series of observations in limits of period of 1937-1965. In the little-known areas are undertaken the stations with the series of observations not less than 10 years.

If in the beginning or at the end of winter stored up water was observed less than in 50% of winters, its average value is not calculated also in appropriate decade/ten-day period is placed conditional mark (•) point.

Water supply in snow cover is calculated according to observational data of height and density and is equal to product of height/altitude to density

$$S = 10\ hd,$$

where h - height in centimeters, d - its density. In order to obtain

the water supply in the millimeters, they multiply the height/altitude of snow by 10.

Water supply, thus, is layer of water, which would be formed on earth's surface, if snow cover completely melted.

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Water supply in snow cover to a considerable degree determines value of spring flood, moisture receipt of soil in spring period and in the beginning of summer, etc.; therefore very widely is utilized in practice.

Water supply in snow cover increases in proportion to increase in height/altitude of snow, reaching maximum values or simultaneously with maximum depth of snow cover or for 1-2 decades/ten-day periods later due to increase in density of snow cover. For example, on st. Ust'-Kamchatsk the maximum of depth of snow cover falls to the first decade/ten-day period of April, and the maximum of the water supply - to third.

In essence on all stations of territory in question maximum values of supply of water of snow cover are noted during March-April. In the valley region of Kamchatka of maximum value it stored up water it reaches most frequently in the second-third decade/ten-day period of March comprises in the center section of 140-150 mm, in northern and southern 250-280 mm (in Pushchino 440 mm). In the West coast the

maximum of the water supply is observed in the third decade/ten-day period of March or the first decade/ten-day period of April and is 115-200 mm, in the East coast in the second-third decade/ten-day period of April are been by 200-415 mm, while at the separate stations - 160-197 mm.

In section "field" in period of snow melting it stored up water it decreases more rapidly than on "clearing in forest" or "in forest under crowns". Thus, on st. Mil'kovo in the section "field" into the first and second decades/ten-day periods of May stored up water was equal to respectively 62 mm and to designation •, and on section "in the forest under the crowns" 105 and 38 mm.

Table 5. Frequency of different depth of snow covers on the decades/ten-day periods.

Table 6. Frequency of winters with different greatest decade/ten-day depth of snow cover. In connection with the large variability of depth of snow covers from year to year medium altitude is insufficient for its characteristic in the separate years. The frequency of different depth of snow covers on the decades/ten-day periods and the frequency of winters with the greatest decade/ten-day height are the supplementary characteristics, which substantially more precisely formulate medium altitudes.

For calculating frequencies of different heights/altitudes (Table

5 and 6) are used observations of depth of snow cover on constant racks in essence in open sections with series/rows of different duration within limits of period of 1914-1965. For the little-known areas are represented the data of stations with the period of observations of less than 15 years (Ossora, Ganaly, etc.). Data of these stations in Tables 5 and 6 should be considered tentative.

Table 5 in gradation of height/altitude zero ("0") shows frequency of cases, when depth of snow cover is equal to zero or less than 0.5 cm (stands sign point). They show data of Table 5, in what limits during the winter depth of snow cover at the separate stations changes and which the frequency of different depth of snow covers on the decades/ten-day periods. Thus, to st. Africa, cape, depth of snow cover grows/rises for the winter from 0 to 100-125 cm. Moreover, in the beginning of winter (in the second decade/ten-day period of November) the greatest frequency (more than than 50%) have the small heights/altitudes of snow, 1-5 cm, and during March the heights/altitudes of 31-50 cm most frequently are encountered.

In first decade/ten-day period of May at this station in some years (9% of cases) snow cover almost completely converges (height 0), into others - with the same frequency snow is retained height of 76-100 cm.

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Table 6 gives demonstrative representation, as winters with

different greatest decade/ten-day depth of snow covers frequently are repeated. The frequency of largest decade/ten-day depth of snow covers 180-200 cm and more is observed on station Pushchino and Nachiki. These stations also have largest average decade/ten-day depth of snow cover (Table 1): Pushchino - 162 cm, Nachiki - 139 cm. At st. Pushchino are not encountered the greatest in the decade/ten-day period heights of snow less than 110 cm. Most frequently (in 25% of all winters) maximum depth of snow cover at this station is 191-200 cm. In Nachiki in 3% of winters depth of snow cover exceeds 240 cm.

Table 7. Dates of appearance and descent of snow cover, formation and destruction of stable snow cover. This table depicts many-year average/mean and extreme (early and late) dates of appearance and descent of snow cover, formation and destruction of stable snow cover and number of days with snow cover for the winter.

Data of Table 7 are acquired from series of observations of different duration within limits of period of 1914-1965. However, complete series of observations have very limited number of stations. The means of date on the stations with the period of 20 years and are less given to the more prolonged periods the method of differences. Extreme dates are selected directly from the series of observations into basic more than than 25 years.

Snow cover in the daytime is considered such, into which more

than than half of visible vicinity is covered with snow.

By stable it is customary to assume such snow cover, which lies/rests continuously during entire winter or not less than intermittent month to more than than three days in a row on the whole. In this case the interruption during one day in the beginning of winter was not taken into consideration, if it preceded the occurrence of snow cover not less than 5 days. It was not accepted in attention and interruption of 2-3 days, if before this snow cover lay not less than 10 days. If at the end of the winter not more than three days after the descent of snow cover, restrike covering and not less than 10 days lies/rests, then it is considered that the occurrence of stable snow cover is continuous.

Time of setting snow cover has high value for agriculture. The previous setting of snow cover protects soil from freezing. In spring this soil earlier thaws and absorbs more moisture.

Dates of formation and destruction of stable snow cover usually are very close to dates of beginning of freezing and thawing of soil. For example, in Ust'-Kamchatsk the first frost in the soil at the depth of 0.4 m occurs on the average on 20 November, the formation of stable snow cover - on 13 November; latter/last frost - on 18 May, and the destruction of stable covering occurs on 19 May.

Table 9. Greatest decade/ten-day depth of snow covers of

different security. Table depicts the total probability (security) of greatest decade/ten-day depth of snow covers for the winter, the equal or more indicated values with the different values of many-year averages from the greatest decade/ten-day heights.

Data of Table 9 as data of Table 6, are calculated on the basis of materials of observations according to constant racks, established/installed predominantly in open sections, of series of observations of larger partly 25-30 years in limits of period of 1914-1965. In Table 9 are placed also the data of several stations with the period of observations of less than 15 years.

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Average values of greatest decade/ten-day depth of snow covers, represented in Table 1, insufficiently fully characterize height/altitude in separate years due to its large variability from year to year. Therefore it is interesting to know for solving the series/row of practical questions, as frequently in winter periods it is possible to await one or the other depth of snow cover. Table 9 depicts the height/altitude, equal and than more indicated, probable in 95, 90, 75, 50, 25, 10 and 5% of winters and average/mean from the greatest decade/ten-day heights for the winter on the separate stations. For example, on st. Ust'-Khayryuzovo with the average from the greatest decade/ten-day heights for the winter, the the equal to 56 cm, in 95% of winters it is equal to 20 cm and more, and in 5% of winters - 96 cm and more.

Table 10. Dates of the formation of stable snow cover of different security.

Table 11. Dates of the destruction of stable snow cover of different security. These tables present the dates of formation and destruction of stable snow cover of different security, and also their earliest and latest dates.

Stations, which have longest (20-30 years) and homogeneous observational data in limits of period of 1914-1965, are undertaken for calculating security in Tables 10 and 11.

Average many-year values are good comparative characteristics. But the variability of the characteristics of snow cover as other meteorological elements, from year to year is great, and average values very rarely are observed in the separate years. Therefore for the more complete characteristic of winter conditions it is necessary to know not only the average periods of the formation of stable snow cover, but also that, how frequently and in what limits it is possible to expect their change in separate years. This question answer the probabilistic characteristics of element (security).

It is possible to determine according to Tables 10 and 11, how frequently stable snow cover can be formed earlier or be destroyed later usual.

For example, for st. Ust'-Kamchatsk (Table 10) 1 time in 10 years (security with 10%) it is possible to expect that stable snow cover is formed on 22 October and earlier. But at the station Preobrazhenskiy (Is. Medniy) 1 time in 2 years (security with 50%) stable snow cover is destroyed on 3 May and later.

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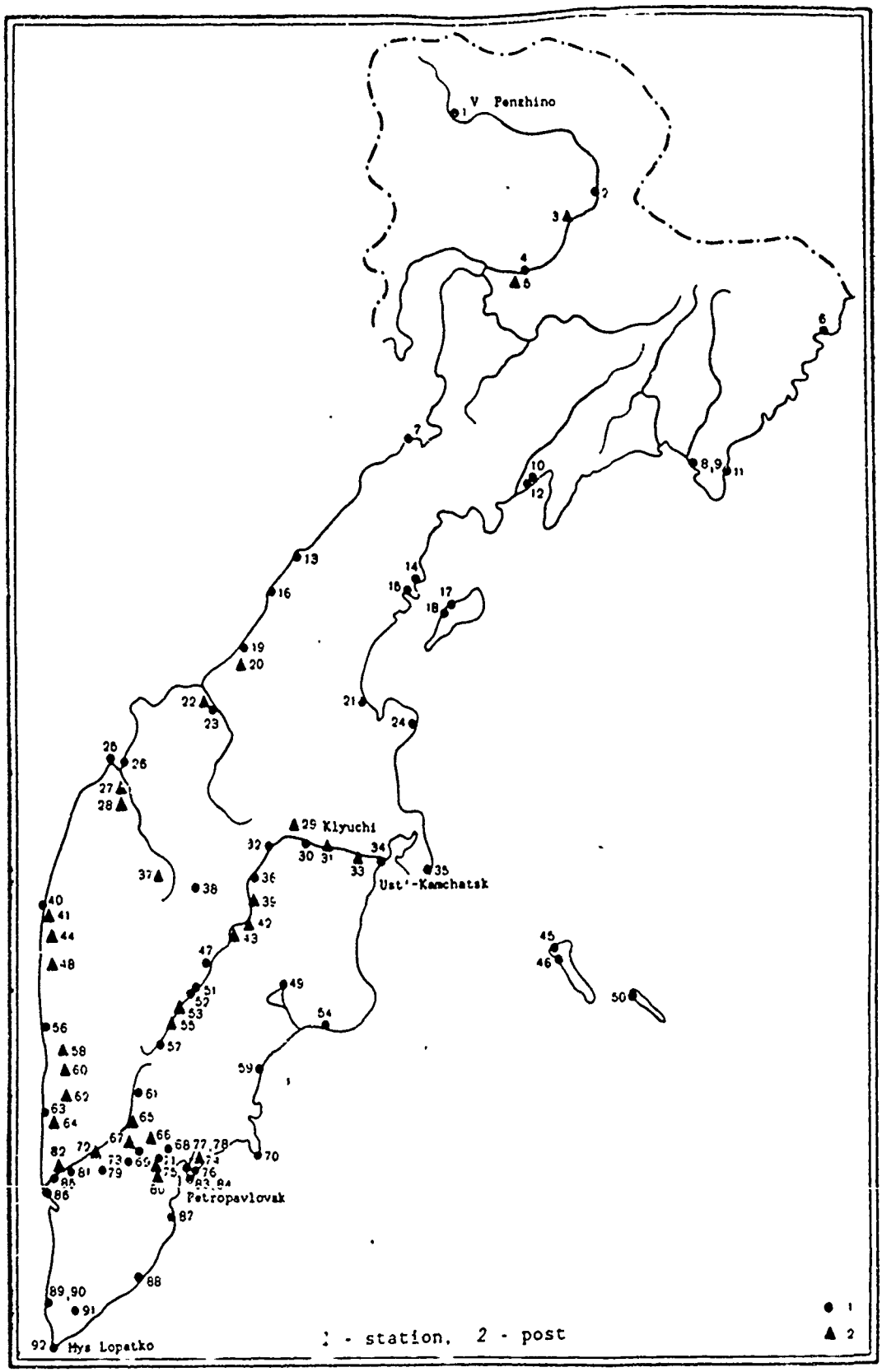
LIST OF METEOROLOGICAL STATIONS AND POSTS

1. Verkhne-Penzhino
2. Slautnoye
3. Oklan
4. Kamenskoye
5. Talovskiy sovkhoz
6. Natal'ya
7. Chemurnaut
8. Apuka I
9. Apuka II
10. Tilichiki
11. Topata-Olyutorskaya
12. Korf
13. Ust'-Lesnaya
14. Ossora
15. Karaga
16. Ust'-Palana
18. Karaginskiy ostrov [island] I
19. Ust'-Voyampolka
20. Korn
21. Uka
22. Napana
23. Tigil
24. Ozernoy, mys [cape]
25. Ptichiy ostrov [island]
26. Ust'-Khayryuzovo
27. Belogolovoye
29. Kharchino
30. Klyuchi
31. Bol'shiye Shcheki
32. Kozyrevskiy sovkhoz
33. Nizhne-Kamchatsk
34. Ust'-Kamchatsk
35. Afrika, mys [cape]
36. Kozyrevsk
37. Moroshechnoye
38. Esso
39. Sredne-Kamchatsk
40. Icha
41. Icha, post
42. Tolbachik
43. Shchapino
44. Nizhne-Oblukovino
45. Nikol'skoye (o. Beringa) I
46. Nikol'skoye (o. Beringa) II
47. Dolinovka
48. Krutogorovo
49. Kronotskoye ozero [lake]
50. Preobrazhenskoye [o. Mednyy]
51. Mil'kovo agricultural research station [s.-kh. op. st.]
52. Mil'kovo
53. Verkhne-Kamchatsk
54. Storozh, bukhta [bay]
55. Sharomy
56. Sobolevo
57. Pushchino
58. Sobolevskiy sovkhoz
59. Semlyachiki
60. Privol'noye
61. Ganaly
62. Shakhty
63. Kikhchik
64. Kikhchik, post
65. Malka
66. Koryaki
67. Nachinskiy sovkhoz
68. Yelizovo
69. Nachiki
70. Shipunskiy, mys [cape]
71. Kamchatskaya agro
72. Perevesnyy
73. Nachinskoye ozero [lake]
74. Dal'nyy sovkhoz
75. Nikolayevka
76. Petropavlovsk
77. Petropavlovsk, city [gorod] I
78. Petropavlovsk, city [gorod] II
79. Apacha
80. Paratunka
81. Bol'sheretskiy sovkhoz
82. Nachilovo
83. Petropavlovsk, lighthouse [mayak] I
84. Petropavlovsk, lighthouse II
85. Bol'sheretsk
86. Ust'-Bol'sheretsk
87. Povorotnyy, mys [cape]
88. Khodutka
89. Ozernaya I
90. Ozernaya II
91. Pauzhetskiye klyuchi [keys]
92. Lopatka, mys [cape]

INDEX FOR TABLES OF GENERALIZED CHARACTERISTICS

Table	Name of Table	Observation period
4	Monthly and annual amounts of precipitation (mm) with different probability	1891-93, 1909-10, 1914-65

MAP OF NETWORK OF METEOROLOGICAL STATIONS AND POSTS



SECTION 1

HUMIDITY OF THE AIR

TABLE 1
AVERAGE MONTHLY AND ANNUAL WATER VAPOR PRESSURE (mb)

Station No	Station	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
1	Verkhne-Penshino	1.0	0.7	0.8	1.7	4.1	7.6	10.3	9.2	5.8	2.4	1.1	0.7	3.8
2	Slautnoye	1.2	0.9	1.2	2.4	5.0	8.3	11.2	10.4	6.9	3.0	1.4	1.1	4.4
4	Kamenskoye	1.4	1.0	1.7	2.5	4.9	8.2	11.1	10.6	7.2	3.2	1.6	1.1	4.5
7	Chemurnaut	2.1	1.4	2.1	3.1	5.3	7.6	10.6	10.9	8.3	4.3	2.6	1.8	5.0
8, 9	Apuka	2.6	2.2	2.2	3.5	5.5	8.3	11.0	11.2	8.2	4.6	3.0	2.4	5.4
11	Topata-Olyutorskaya	2.8	2.4	2.4	3.5	5.1	7.6	10.2	10.4	8.0	4.9	3.7	2.8	5.3
10, 12	Tilichiki, Korf	2.3	1.8	2.1	3.2	5.3	8.3	11.4	11.3	8.0	4.4	2.8	2.1	5.3
13	Ust'-Lesnaya	2.1	1.8	2.2	3.5	5.4	7.7	10.5	11.0	8.5	5.1	3.2	2.2	5.3
14, 15	Oesora, Karaga	2.2	2.1	2.3	3.4	5.3	8.0	11.5	11.5	8.4	4.9	3.2	2.3	5.4
16	Ust'-Palana	2.1	1.9	2.3	3.4	5.2	7.7	10.5	11.0	8.4	5.2	3.1	2.1	5.2
17	Karaginskiy ostrov	3.1	2.7	2.6	3.7	5.6	8.3	11.4	11.8	9.2	5.9	4.2	3.2	6.0
18	Karaginskiy ostrov	2.6	2.5	2.5	3.6	5.4	8.2	11.4	12.0	8.7	5.4	4.0	3.0	5.8
19	Ust'-Voyampolka	1.8	1.6	2.0	3.6	5.5	8.1	10.9	11.4	8.8	5.3	3.2	2.2	5.4
21	Uka	2.2	2.1	2.3	3.4	5.4	8.1	12.0	12.3	8.9	5.3	3.3	2.5	5.6
23	Tigil'	1.7	1.6	2.1	3.5	5.5	8.3	11.8	11.6	8.6	5.3	2.9	1.9	5.4
24	Ozernoy, mys	2.8	2.6	2.6	3.7	5.4	7.6	11.3	11.9	8.9	5.4	3.8	2.9	5.7
25	Ptichiy ostrov	2.4	2.3	2.6	3.9	5.8	8.4	11.3	12.2	10.0	6.2	3.9	2.9	6.0
26	Ust'-Khayryuzovo	2.1	1.9	2.4	3.8	5.9	8.7	11.8	12.3	9.5	5.9	3.5	2.4	5.8
30	Klyuchi	1.9	2.0	2.4	3.6	5.5	8.7	12.7	12.7	8.9	5.0	3.0	2.0	5.7
32	Kozyrevskiy sovkhoz	1.8	2.0	2.4	3.6	5.4	8.8	13.0	12.9	8.8	5.0	3.0	2.0	5.7
34	Ust'-Kamchatsk	2.6	2.6	2.8	4.1	5.9	8.5	11.7	12.3	9.6	5.8	3.7	2.8	6.0
35	Afrika, mys	3.3	3.2	3.3	4.2	5.7	7.7	10.4	11.5	9.4	5.8	4.1	3.6	6.0
36	Kozyrevsk	1.7	1.8	2.3	3.7	5.4	8.7	12.9	12.7	8.6	4.8	2.9	1.9	5.6
38	Zaso	1.4	1.4	1.7	3.0	4.7	7.6	11.1	10.6	7.2	4.1	2.4	1.7	4.7
40	Icha	2.2	1.9	2.5	4.0	6.1	8.5	11.5	12.7	10.1	6.4	4.0	2.5	6.0
45, 46	Nikol'skoye (o. Beringa) I, II	4.2	4.0	4.2	5.1	6.2	7.9	10.5	11.8	10.1	7.0	5.2	4.1	6.7
47	Dolinovka 3	1.4	1.6	2.2	3.6	5.4	8.7	12.9	12.9	8.5	4.7	2.6	1.7	5.5
49	Kronotskoye ozero	1.7	1.6	1.9	3.0	4.8	7.4	10.7	11.2	7.6	4.5	2.7	1.9	4.9
50	Preobrazhenskoye (o. Mednyy)	4.4	4.2	4.4	5.2	6.3	7.9	10.4	11.7	10.0	7.2	5.4	4.5	6.8
51	Mil'kovo, exp. agr. sta.	1.5	1.7	2.1	3.4	5.3	8.9	13.1	12.8	8.4	4.7	2.6	1.6	5.5
52	Mil'kovo	1.4	1.6	2.0	3.5	5.2	8.6	13.1	12.8	8.2	4.5	2.5	1.6	5.4
54	Storozh, bukhta	2.7	2.7	2.9	4.2	5.9	8.3	11.5	12.2	9.3	5.7	3.7	2.9	6.0
56	Sobolevo	2.0	1.9	2.5	4.1	6.2	8.7	12.0	12.8	10.0	6.5	3.8	2.5	6.1
57	Pushchino	1.5	1.6	1.9	3.3	5.1	8.4	12.8	12.6	8.3	4.9	2.7	1.8	5.4
59	Semlyachiki	2.7	2.7	3.0	4.2	6.0	8.7	11.9	12.6	9.8	5.6	3.4	2.8	6.1
61	Ganaly	1.5	1.6	1.9	3.3	5.0	7.7	12.0	12.2	8.2	4.9	2.7	1.6	5.2
63	Kikhchik	2.1	2.2	2.7	4.4	6.2	8.3	11.3	12.3	10.3	6.9	4.3	2.8	6.2
68	Yelizovo	2.2	2.2	2.8	4.2	6.0	8.8	12.3	12.8	9.4	5.5	3.4	2.5	6.0
69	Nachiki	1.6	1.6	2.1	3.4	5.1	7.8	11.5	11.9	8.5	5.2	2.9	1.8	5.3
70	Shipunskiy mys	3.2	3.1	3.5	4.4	5.7	8.1	11.2	12.1	9.9	6.2	4.3	3.3	6.2
71	Kamchatskaya, agro	2.2	2.2	2.7	4.2	5.5	8.3	11.9	12.4	9.7	5.8	3.4	2.6	5.9
73	Nachikinskoye ozero	1.7	1.8	2.3	3.5	5.1	7.5	11.4	12.1	8.9	5.5	3.2	2.0	5.4
76	Petropavlovsk	2.5	2.6	3.0	4.4	5.8	8.4	12.0	12.7	9.7	5.7	3.8	2.9	6.1
77, 78	Petropavlovsk, city I, II	2.5	2.4	3.0	4.2	5.9	8.7	12.0	12.8	9.8	6.1	3.8	2.8	6.2
79	Apacha	2.0	1.9	2.4	3.8	5.7	8.4	12.3	12.8	9.5	6.1	3.5	2.4	5.9
81	Bol'sheretskiy sovkhoz	2.2	2.2	2.7	4.3	6.1	8.7	12.1	12.9	10.1	6.7	4.0	2.7	6.2
83, 84	Petropavlovsk, lighthouse I, II	2.7	2.7	3.1	4.2	5.8	8.4	11.5	12.3	9.7	6.0	4.0	3.0	6.1
86	Ust'-Bol'sheretsk	2.5	2.4	2.9	4.5	6.1	8.4	11.3	12.5	10.6	7.2	4.5	3.0	6.3
87	Povorotnyy, mys	2.8	2.9	3.2	4.2	5.7	8.0	11.8	12.6	9.9	6.3	4.0	3.2	6.2
88	Khodutka	2.8	2.8	3.2	4.5	5.9	8.2	11.5	12.1	9.8	6.6	4.5	3.2	6.3
89, 90	Ozernaya I, II	3.3	3.0	3.1	5.0	6.2	8.1	10.9	12.2	10.5	7.5	5.1	3.8	6.6
92	Lopatka, mys	3.7	3.4	3.9	4.9	6.1	7.8	10.1	11.5	10.6	7.7	5.3	4.0	6.6

TABLE 2

AVERAGE MONTHLY AND ANNUAL WATER VAPOR PRESSURE AT DIFFERENT TIMES OF DAY (mb)

Time	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
1. Verkhne-Penzhino													
1	0.9	0.6	0.7	1.4	3.8	7.3	9.7	8.5	5.5	2.2	1.0	0.8	3.5
7	0.8	0.6	0.7	1.4	4.0	7.7	10.4	9.2	5.6	2.1	1.0	0.8	3.7
13	0.9	0.8	1.0	2.0	4.2	7.6	10.2	9.4	6.2	2.5	1.2	0.8	3.9
19	0.9	0.7	1.0	1.9	4.3	7.7	10.5	9.8	6.0	2.3	1.1	0.7	3.9
10, 12. Tilichiki, Korf													
1	2.3	1.8	2.1	3.0	5.1	8.0	11.1	11.0	7.9	4.3	2.8	2.1	5.1
7	2.3	1.8	2.0	3.0	5.2	8.2	11.2	11.0	7.8	4.2	2.7	2.1	5.1
13	2.3	1.8	2.3	3.4	5.5	8.6	11.6	11.5	8.1	4.5	2.9	2.2	5.4
19	2.3	1.8	2.1	3.3	5.5	8.6	11.7	11.7	8.2	4.4	2.8	2.1	5.4
13. Ust'-Lesnaya													
1	2.0	1.7	2.0	3.3	5.1	7.2	9.9	10.2	8.1	5.0	3.2	2.2	5.0
7	2.0	1.7	1.9	3.3	5.3	7.8	10.7	11.0	8.3	4.9	3.2	2.2	5.2
13	2.1	2.0	2.5	3.8	5.6	8.0	10.9	11.4	9.1	5.3	3.3	2.3	5.5
19	2.0	1.8	2.3	3.7	5.5	8.0	10.8	10.9	8.7	5.1	3.2	2.2	5.4
17, 18. Karaginskiy ostrov I, II													
1	3.1	2.6	2.5	3.6	5.3	7.7	10.8	11.3	8.9	5.8	4.2	3.2	5.8
7	3.1	2.6	2.5	3.6	5.5	8.2	11.3	11.6	9.1	5.8	4.1	3.2	5.9
13	3.1	2.7	2.8	3.9	5.9	8.7	11.9	12.3	9.7	6.1	4.3	3.2	6.2
19	3.1	2.7	2.7	3.8	5.7	8.6	11.7	11.9	9.2	5.8	4.2	3.2	6.0
23. Tigil'													
1	1.6	1.5	1.7	3.3	5.0	7.5	10.7	10.8	8.2	5.2	2.9	1.9	5.0
7	1.6	1.4	1.5	3.2	5.2	8.9	11.4	10.9	8.1	5.1	2.8	1.8	5.1
13	1.8	1.7	2.1	3.7	5.5	8.6	12.7	12.6	8.9	5.5	3.1	2.1	5.8
19	1.7	1.6	2.0	3.7	5.5	8.4	12.4	12.3	9.1	5.4	2.9	1.9	5.6
26. Ust'-Khayryuzovo													
1	2.0	1.8	2.2	3.5	5.5	8.1	11.2	11.6	9.2	5.8	3.5	2.3	5.6
7	2.0	1.7	2.1	3.4	5.7	8.5	11.6	11.9	9.0	5.7	3.3	2.3	5.6
13	2.2	2.0	2.8	4.1	6.3	8.8	12.6	13.1	10.0	6.1	3.7	2.4	6.2
19	2.0	1.9	2.5	3.9	6.1	8.8	12.0	12.6	9.9	6.0	3.6	2.4	6.0
30. Klyuchi													
1	1.9	1.9	2.3	3.5	5.4	8.4	12.0	12.0	8.8	4.9	3.0	2.0	5.5
7	1.8	1.8	2.1	3.6	5.5	8.7	12.4	12.2	8.7	5.0	2.9	2.0	5.6
13	2.1	2.1	2.6	3.7	5.6	8.8	12.9	12.9	9.1	5.1	3.2	2.1	5.8
19	2.0	2.1	2.5	3.8	5.6	9.0	13.5	13.5	9.4	4.9	3.1	2.1	6.0
34. Ust'-Kamchatsk													
1	2.5	2.5	2.5	3.8	5.7	8.2	11.4	12.1	9.6	5.8	3.6	2.8	5.9
7	2.5	2.5	2.5	3.8	5.7	8.3	11.7	12.2	9.4	5.6	3.6	2.7	5.9
13	2.6	2.7	3.1	4.4	6.1	8.6	11.9	12.5	9.6	5.8	3.8	2.9	6.2
19	2.5	2.6	2.9	4.3	6.0	8.5	11.7	12.5	10.0	6.0	3.7	2.8	6.1
38. Esso													
1	1.3	1.3	1.5	2.9	4.7	7.4	10.4	10.0	7.0	4.1	2.3	1.6	4.5
7	1.3	1.3	1.4	2.8	4.8	7.7	10.9	10.1	6.8	3.9	2.2	1.6	4.6
13	1.6	1.7	2.0	3.0	4.5	7.3	11.3	10.7	7.2	4.2	2.6	1.9	4.8
19	1.4	1.5	1.9	3.2	4.8	7.9	11.8	11.4	7.7	4.3	2.4	1.6	5.0

Time	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
						45, 46. Nikol'skoye (o. Beringa) I, II							
1	4.2	4.1	4.3	5.1	6.0	7.7	10.2	11.6	9.9	7.0	5.3	4.4	6.6
7	4.2	4.1	4.2	5.1	6.2	7.9	10.5	11.8	10.0	7.0	5.2	4.4	6.7
13	4.2	4.2	4.4	5.3	6.3	8.1	10.8	12.2	10.5	7.1	5.3	4.4	6.9
19	4.1	4.0	4.3	5.2	6.2	8.0	10.6	11.8	10.0	6.9	5.1	4.3	6.7
						52. Mil'kovo.							
1	1.4	1.5	1.8	3.5	5.3	8.3	12.0	11.6	7.8	4.5	2.4	1.5	5.1
7	1.3	1.4	1.7	3.5	5.4	8.6	12.6	12.0	7.7	4.3	2.2	1.5	5.2
13	1.7	2.0	2.3	3.5	5.1	8.5	13.4	13.0	8.5	4.5	2.8	1.9	5.6
19	1.5	1.6	2.1	3.5	5.1	8.8	14.3	14.4	8.9	4.6	2.6	1.6	5.8
						69. Nachiki							
1	1.5	1.5	1.9	3.3	5.0	7.3	10.4	11.0	8.0	5.1	2.7	1.7	5.0
7	1.4	1.3	1.8	3.2	5.0	7.6	11.0	11.3	8.0	5.0	2.6	1.6	5.0
13	1.9	2.0	2.5	3.6	5.1	8.0	12.3	12.6	8.8	5.5	3.2	2.2	5.6
19	1.6	1.7	2.3	3.6	5.2	8.2	12.3	12.7	9.1	5.4	2.9	1.8	5.6
						77, 78. Petropavlovsk, city I, II							
1	2.5	2.4	2.9	4.0	5.7	8.3	11.6	12.5	9.8	6.2	3.8	2.8	6.0
7	2.5	2.3	2.8	4.0	5.8	8.5	11.8	12.4	9.5	5.9	3.8	2.8	6.0
13	2.6	2.5	3.1	4.2	6.0	8.9	12.6	13.3	10.2	6.3	4.0	2.9	6.4
19	2.6	2.5	3.1	4.3	6.0	8.7	12.2	12.8	9.9	6.2	3.9	2.8	6.2
						81. Bol'sheretskiy sovkhoz							
1	2.1	2.0	2.3	4.0	5.8	8.1	11.1	12.1	9.4	6.5	3.7	2.6	5.8
7	2.1	2.0	2.3	4.1	6.0	8.4	11.6	12.4	9.4	6.2	3.6	2.6	5.9
13	2.4	2.5	2.9	4.4	6.4	9.2	13.2	13.7	10.3	6.8	4.2	3.0	6.6
19	2.2	2.2	2.8	4.4	6.2	8.9	12.4	13.3	10.3	6.8	3.8	2.7	6.3
						83, 84. Petropavlovsk, lighthouse							
1	2.7	2.7	3.1	4.1	5.7	8.2	11.2	12.1	9.7	6.1	4.0	3.0	6.0
7	2.7	2.6	3.0	4.1	5.7	8.3	11.4	12.1	9.4	5.9	3.9	2.9	6.0
13	2.8	2.8	3.1	4.3	5.9	8.6	11.8	12.5	9.9	6.0	4.2	3.0	6.3
19	2.7	2.8	3.2	4.3	5.9	8.4	11.4	12.3	9.6	6.1	4.0	3.0	6.1
						86. Ust'-Bol'sheretsk							
1	2.4	2.3	2.7	4.3	6.0	8.2	11.1	12.3	10.3	7.2	4.4	3.6	6.2
7	2.3	2.2	2.6	4.3	6.0	8.4	11.3	12.3	10.2	6.9	4.3	2.9	6.2
13	2.6	2.7	3.3	4.7	6.3	8.6	11.6	12.8	10.9	7.4	4.6	3.2	6.6
19	2.5	2.4	3.0	4.6	6.2	8.6	11.4	12.7	10.8	7.3	4.6	3.0	6.4
						92. Lopatka, mys							
1	3.7	3.4	3.8	4.9	6.0	7.6	9.8	11.4	10.4	7.7	5.4	4.0	6.5
7	3.7	3.4	3.9	4.9	6.0	7.8	10.0	11.4	10.5	7.6	5.3	4.0	6.5
13	3.7	3.4	4.0	5.1	6.2	8.0	10.5	12.0	10.9	7.7	5.3	4.1	6.7
19	3.7	3.3	3.9	4.9	6.1	7.8	10.1	11.4	10.5	7.6	5.3	4.0	6.6

TABLE 3
AVERAGE MONTHLY AND ANNUAL RELATIVE HUMIDITY OF THE AIR (%)

Station No	Station	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
1	Verkhne-Penshino	76	73	69	71	70	62	70	74	76	76	78	76	73
2	Slautnoye	77	76	76	78	75	66	74	79	81	81	79	78	77
4	Kamenskoye	80	78	80	79	74	69	74	78	78	79	80	78	77
7	Chemurnaut	79	76	77	80	82	78	81	82	82	79	80	79	80
8, 9	Apuka I, II	78	76	74	80	84	88	89	88	83	78	76	76	81
11	Topeta-Olyutorskoye	77	74	77	78	81	84	84	83	82	74	76	75	79
10, 12	Tilichiki, Korf	74	68	71	75	79	80	82	80	76	74	73	72	75
13	Ust'-Lesnaya	80	79	78	79	78	80	85	87	83	79	80	80	81
14, 15	Ossora, Karaga	79	78	78	80	82	81	83	82	80	77	78	78	80
16	Ust'-Palana	78	77	76	76	76	80	85	87	84	81	80	79	80
17	Karaginskiy ostrov	84	84	83	82	84	83	83	83	83	80	83	83	83
18	Karaginskiy ostrov	81	80	81	81	83	84	86	86	84	82	85	81	83
19	Ust'-Voyampolka	83	82	81	82	82	85	88	90	86	83	84	84	84
21	Uka	84	82	82	83	87	84	84	84	82	79	82	84	83
23	Tigil'	81	81	76	75	72	73	79	84	82	82	82	82	79
24	Ozernoy, mys	80	78	78	79	81	84	86	87	84	78	79	80	81
25	Ptichiy, ostrov	80	77	73	78	82	88	91	90	87	82	82	81	83
26	Ust'-Khayryuzovo	84	84	82	83	84	86	88	89	87	84	85	84	85
30	Klyuchi	82	79	74	71	69	69	76	80	79	72	79	83	76
32	Kozyrevskiy sovkhoz	81	79	74	71	67	68	76	81	80	74	82	85	76
34	Ust'-Kamchatsk	81	82	80	82	86	87	88	86	84	77	78	81	83
35	Afrika, mys	78	78	77	80	86	90	90	88	82	70	70	74	80
36	Kozyrevsk	82	79	74	70	64	66	75	80	79	76	83	85	76
38	Esso	81	77	73	70	66	67	76	78	78	77	81	82	76
40	Icha	78	78	76	81	86	89	92	91	86	83	82	78	84
45, 46	Nikol'skoye (o. Beringa) I, II	83	83	84	85	87	90	94	92	87	81	82	82	86
47	Dolinovka	83	79	72	67	63	66	75	81	81	77	84	85	76
49	Kronotskoye ozero	74	74	70	70	68	74	81	84	81	72	73	76	75
50	Preobrazhenskoye (o. Mednyy)	80	79	81	85	87	90	91	90	86	82	81	78	84
51	Mil'kovo, exp. agr. sta.	82	80	74	68	64	67	78	82	81	77	84	84	77
52	Mil'kovo	82	80	73	68	63	66	76	80	78	74	82	84	76
54	Storozh, bukhta	69	69	68	75	80	86	88	88	86	74	71	70	77
56	Sobolevo	82	80	78	83	85	87	90	91	88	85	85	84	85
57	Pushchino	79	78	73	69	68	66	77	81	80	75	80	82	76
59	Semlyachiki	65	64	66	72	80	86	88	85	80	64	60	63	73
61	Ganaly	77	74	72	70	68	68	80	84	82	80	81	81	76
63	Kikhchik	84	82	81	85	88	91	93	93	89	85	85	85	87
68	Yelizovo	72	71	69	72	74	78	82	83	82	73	73	75	76
69	Nachiki	80	78	76	76	75	76	82	85	82	81	83	82	80
70	Shipunskiy, mys	70	69	72	76	80	86	87	86	82	70	68	68	76
71	Kamchatskoye, agro	70	66	67	69	74	78	82	83	82	74	71	72	74
73	Nachikinskoye ozero	80	77	77	78	79	80	83	85	83	81	82	81	81
76	Petropavlovsk	64	65	67	74	76	79	81	82	78	68	68	67	72
77, 78	Petropavlovsk, city I, II	67	64	65	69	74	80	82	82	78	69	68	67	72
79	Apacha	78	76	76	77	76	79	86	88	84	84	83	82	81
81	Bol'sheretskiy sovkhoz	82	80	80	82	83	84	89	90	87	87	87	84	85
83, 84	Petropavlovsk, lighthouse I, II	76	74	74	76	81	88	88	87	84	72	74	77	79
86	Ust'-Bol'sheretsk	82	81	82	85	87	90	94	93	88	85	86	85	86
87	Povorotnyy, mys	64	64	66	68	74	80	83	84	81	70	64	64	72
88	Khodutka	68	69	72	78	79	83	86	86	85	80	78	72	78
89, 90	Ozernaya I, II	80	80	80	83	84	89	92	92	87	83	82	80	84
92	Lopatka, mys	84	83	86	90	93	96	97	97	93	85	83	81	89

TABLE 4

AVERAGE MONTHLY AND ANNUAL RELATIVE HUMIDITY AT DIFFERENT TIMES OF DAY (%)

Time	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
						1. Verkhne-Penzhino							
1	76	74	73	80	81	81	87	88	88	81	78	76	80
7	79	74	73	78	75	67	76	84	88	81	78	76	77
13	75	72	64	62	60	49	54	57	60	65	76	76	64
19	76	73	67	64	63	52	61	65	68	76	78	76	68
						2. Slautnoye							
1	77	77	78	84	89	86	89	93	92	85	80	78	84
7	78	77	78	81	78	71	79	86	90	86	80	78	80
13	77	74	71	72	64	51	60	63	64	72	77	77	68
19	77	77	76	77	70	56	66	75	79	82	79	78	74
						4. Kamenskoye							
1	79	78	81	83	81	85	87	88	86	83	80	78	82
7	80	79	82	83	79	77	82	87	86	85	80	78	81
13	79	76	77	74	66	54	61	65	65	71	79	77	70
19	80	78	80	77	68	60	66	73	75	77	80	78	74
						7. Chemurnaut							
1	80	76	78	82	85	86	88	85	86	81	81	79	82
7	79	76	78	81	83	79	84	84	85	81	80	79	81
13	79	75	74	78	79	72	75	78	73	75	79	79	76
19	78	75	77	79	81	74	77	80	82	79	80	79	78
						8, 9. Apuka							
1	78	77	75	83	88	92	93	92	88	81	76	76	83
7	78	76	75	82	85	88	90	90	87	81	76	76	82
13	78	75	73	76	79	83	85	82	74	71	74	76	77
19	79	76	74	81	84	87	88	87	82	78	76	76	81
						11. Topata-Olyutorskaya							
1	76	75	77	81	85	89	90	88	86	76	77	76	81
7	77	74	78	79	81	84	85	84	84	76	76	76	80
13	78	74	74	74	77	80	78	77	74	69	75	74	75
19	77	74	78	79	82	81	82	84	82	76	76	75	79
						10, 12 Tilichiki, Korf							
1	75	69	73	78	83	86	87	86	82	77	74	72	78
7	75	69	72	76	80	82	84	83	81	77	74	72	77
13	73	67	69	71	74	74	75	73	67	67	71	72	71
19	75	68	71	76	79	79	80	80	76	74	73	72	75
						13. Ust'-Lesnaya							
1	81	80	80	83	85	88	91	92	87	82	81	81	84
7	81	80	80	80	78	80	85	88	85	83	81	81	82
13	79	76	74	74	72	75	80	81	74	72	77	79	76
19	81	79	80	80	78	79	84	87	85	80	79	80	81
						14, 15. Ossora							
1	80	79	80	84	88	90	90	88	87	82	80	79	84
7	80	79	80	83	83	83	85	85	85	82	80	79	82
13	77	74	73	74	75	73	76	74	68	67	75	77	74
19	79	78	78	81	82	78	80	82	80	77	79	78	79

Time	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
						16. Ust'-Palana							
1	80	77	79	80	82	88	92	92	89	85	81	80	84
7	78	79	80	79	78	82	86	90	88	84	82	80	82
13	77	74	70	70	70	74	80	82	75	73	78	78	75
19	79	77	75	73	73	76	81	85	82	81	80	79	78
						17. Karaginskiy ostrov							
1	84	85	83	82	85	86	86	86	85	82	84	84	84
7	85	85	84	83	85	85	85	85	85	82	83	83	84
13	84	83	82	79	82	80	80	80	79	77	82	82	81
19	84	84	83	82	84	82	82	82	82	81	84	83	83
						18. Karaginskiy ostrov							
1	82	81	82	83	87	91	93	90	89	85	84	81	86
7	81	80	82	82	83	84	86	87	87	86	85	82	84
13	79	78	79	77	78	78	79	80	74	75	84	80	78
19	81	81	82	81	83	82	84	85	85	83	86	81	83
						19. Ust'-Voyampolka							
1	83	82	83	84	88	91	92	93	90	86	85	85	87
7	83	82	83	85	85	86	90	92	90	87	86	84	86
13	83	80	78	77	77	81	84	85	78	78	83	84	81
19	83	82	81	81	80	83	87	88	84	82	84	84	83
						21. Uka							
1	84	83	84	87	91	92	91	92	90	85	85	85	87
7	84	83	84	87	89	86	87	89	89	86	84	85	86
13	83	81	78	76	81	79	77	74	69	67	77	83	77
19	84	82	82	83	87	81	80	81	80	78	82	84	82
						23. Tigil'							
1	81	84	83	84	86	88	91	93	91	87	85	83	86
7	82	84	83	82	79	82	87	92	91	89	85	84	85
13	79	74	63	63	57	54	64	69	65	70	76	79	68
19	81	81	75	72	68	67	74	81	82	82	84	83	78
						24. Ozernoy, mys							
1	80	79	81	82	85	91	94	92	90	82	81	81	85
7	80	80	79	82	81	83	86	89	87	82	79	81	82
13	79	76	72	74	78	79	79	79	74	69	77	73	76
19	80	78	78	78	81	84	87	87	86	77	80	79	81
						25. Ptichiy ostrov							
1	82	77	75	80	85	90	93	92	90	83	83	81	84
7	81	80	76	81	83	90	93	93	90	83	83	82	85
13	77	75	69	74	80	84	88	88	83	79	79	79	80
19	80	76	71	77	82	87	91	89	86	82	81	81	82
						26. Ust'-Khayryuzovo							
1	85	85	85	87	89	92	94	94	92	88	86	84	88
7	85	85	84	86	85	88	91	93	92	88	86	84	87
13	83	81	78	77	77	78	82	82	76	76	82	83	80
19	85	84	83	83	83	84	87	88	87	86	85	84	85
						30. Klyuchi							
1	83	80	78	78	79	81	86	88	86	77	81	84	82
7	83	82	82	80	76	77	83	87	88	80	82	84	82
13	81	76	66	60	57	56	65	67	64	61	75	82	68
19	82	77	69	66	64	61	71	77	78	69	78	83	73

Time	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
						32. Kozyrevskiy sovkhoz							
1	82	82	81	80	80	83	89	91	89	80	84	86	84
7	82	83	83	81	75	77	84	90	89	84	86	86	83
13	80	72	63	59	52	52	63	66	62	60	76	82	66
19	81	78	67	65	60	58	69	77	79	71	81	85	73
						34. Ust'-Kamchatsk							
1	82	83	82	86	90	93	93	92	90	82	80	82	86
7	82	83	82	85	87	88	89	90	89	83	80	82	85
13	80	79	76	75	79	79	80	77	71	66	72	79	76
19	81	81	79	82	86	87	88	87	85	77	78	81	83
						35. Afrika, mys							
1	78	80	77	80	87	92	93	89	82	72	71	75	81
7	77	79	78	81	86	90	91	88	82	71	71	74	81
13	77	78	76	79	85	86	87	85	78	67	69	74	78
19	78	80	77	82	88	90	90	89	84	72	71	74	81
						36. Kozyrevsk							
1	83	83	81	81	79	82	89	92	87	84	86	85	84
7	83	83	85	80	72	74	83	88	90	87	87	86	83
13	81	72	61	57	49	50	61	64	60	60	75	83	64
19	83	77	67	63	56	56	68	77	80	74	84	85	72
						38. Esso							
1	83	83	84	82	83	87	92	93	91	86	85	84	86
7	84	84	86	80	73	74	85	89	91	86	86	85	84
13	74	63	53	53	48	48	58	58	55	60	69	78	60
19	82	78	68	65	58	58	69	74	75	77	83	83	72
						40. Icha							
1	79	79	78	84	89	93	95	95	91	86	83	79	86
7	80	80	78	83	87	91	94	93	91	86	83	79	85
13	77	75	71	76	80	84	87	86	81	77	79	77	79
19	78	77	77	82	86	89	91	91	88	83	82	78	84
						45, 46. Nikol'skoye (o. Beringa) I, II							
1	84	84	85	86	91	94	96	95	90	83	83	82	88
7	84	83	85	86	88	92	95	93	89	83	83	83	87
13	82	81	82	83	82	85	90	88	82	76	80	81	83
19	83	82	85	86	88	90	93	92	88	82	82	82	86
						47. Dolinovka							
1	85	84	84	83	82	87	91	94	93	88	89	86	87
7	85	85	86	80	71	73	83	90	93	90	90	86	84
13	78	66	54	49	46	48	58	61	57	56	73	81	61
19	84	80	64	57	52	55	67	78	80	75	86	86	72
						49. Kronotskoye ozero							
1	76	78	75	77	82	92	94	95	92	80	77	79	83
7	77	79	76	74	71	79	86	91	90	82	79	79	80
13	70	66	60	57	53	54	63	64	58	55	61	70	61
19	74	75	68	70	68	73	80	85	85	73	74	78	75
						50. Preobrazhenskoye (o. Mednyy)							
1	81	80	81	86	89	93	93	92	88	83	82	79	86
7	81	80	82	85	87	91	91	90	87	83	82	79	85
13	78	78	80	83	84	87	88	87	83	79	79	77	82
19	80	79	81	85	88	91	91	92	87	82	81	77	84

Time	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
51. Mil'kovo, experimental agricultural station													
1	84	85	85	82	82	87	93	94	92	88	89	85	87
7	84	86	87	80	72	76	86	91	93	90	89	85	85
13	77	68	57	49	47	49	60	62	56	58	71	80	61
19	84	82	69	59	53	57	72	32	82	76	86	85	74
52. Mil'kovo.													
1	83	84	84	81	80	84	90	92	91	85	86	84	85
7	83	84	86	82	72	74	85	89	91	87	87	84	84
13	80	72	58	52	48	49	61	61	55	58	72	81	62
19	83	79	65	58	52	56	70	77	76	71	83	85	71
54. Storozh, bukhta													
1	71	72	71	80	86	90	93	93	90	80	75	73	81
7	71	72	70	75	79	85	88	90	89	80	75	72	79
13	64	63	60	68	75	81	84	81	75	69	62	64	70
19	70	70	69	76	81	86	88	89	88	76	73	71	78
56. Sobolevo													
1	84	84	84	89	92	95	97	97	95	90	87	85	90
7	85	85	84	86	87	91	94	96	94	90	88	85	89
13	77	71	68	73	75	77	81	81	74	74	78	80	76
19	82	81	78	83	84	85	89	91	90	87	80	84	85
57. Pushchino													
1	82	83	82	80	80	81	89	91	91	87	86	84	84
7	83	84	84	78	74	74	84	88	89	84	86	84	83
13	72	66	58	56	56	52	63	65	60	58	68	75	62
19	80	80	68	63	60	59	72	80	82	75	82	83	74
59. Semlyachiki													
1	66	65	67	74	83	89	90	88	83	07	02	64	75
7	66	65	66	71	79	86	88	85	80	08	02	64	73
13	63	63	64	70	76	83	85	81	76	58	57	61	70
19	64	65	68	74	81	86	87	85	32	04	01	63	73
61. Ganaly													
1	80	82	83	82	83	87	94	95	94	88	87	82	86
7	80	81	84	80	77	81	91	95	95	90	86	82	85
13	70	61	56	54	52	46	61	64	59	63	60	77	61
19	79	74	66	62	60	58	73	80	80	80	83	82	73
63. Kikhchik													
1	85	84	83	87	91	93	95	95	93	80	87	86	89
7	86	84	84	87	90	93	95	95	93	88	86	86	89
13	83	79	76	80	83	87	89	89	82	78	82	83	83
19	84	82	81	85	88	90	92	92	88	85	80	85	86
68. Yelizovo													
1	76	77	76	80	87	92	94	94	93	84	79	79	84
7	78	80	79	77	79	83	88	91	92	84	81	80	83
13	62	58	55	59	59	62	67	65	62	54	60	66	62
19	71	68	65	71	71	74	79	82	83	72	72	75	74
69. Nachiki													
1	82	82	84	86	86	92	94	94	92	86	80	83	87
7	82	82	84	85	81	85	90	93	92	89	80	83	89
13	77	68	62	61	62	58	66	69	64	67	76	80	68
19	81	78	73	72	71	70	79	83	82	80	84	83	78

Time	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
						70. Shipunskiy, mys							
1	71	69	72	76	80	89	89	88	83	73	68	69	77
7	70	70	72	74	80	88	89	88	83	72	68	69	77
13	69	69	73	75	78	83	83	82	78	65	68	68	74
19	70	68	73	78	81	85	87	87	83	71	69	68	77
						71. Kamchatkskaya agro							
1	73	71	71	75	83	90	93	93	91	80	76	76	81
7	75	75	76	73	78	81	87	90	89	81	78	77	80
13	63	54	55	60	61	63	68	67	63	60	60	65	62
19	68	63	65	69	72	76	79	82	83	74	70	70	73
						73. Nachikinskoye ozero							
1	81	80	82	86	88	92	93	93	92	87	85	82	87
7	81	81	83	85	83	87	90	92	91	88	86	82	86
13	76	70	67	67	68	66	68	70	66	68	75	79	70
19	80	78	75	76	76	76	82	85	83	80	83	82	80
						76. Petropavlovsk							
1	64	65	70	78	81	89	89	88	85	74	70	67	77
7	64	66	70	74	77	80	83	85	82	74	71	69	75
13	62	64	61	70	67	68	70	70	65	56	63	64	65
19	66	66	68	76	77	79	83	85	80	70	67	68	74
						77, 78. Petropavlovsk, city I, II							
1	67	65	67	72	78	85	87	87	83	72	69	68	75
7	69	67	68	72	78	84	86	86	84	74	71	69	76
13	66	62	61	63	67	72	75	75	70	63	65	66	67
19	65	62	63	70	72	77	80	80	76	68	66	66	70
						79. Apacha							
1	80	80	81	85	87	92	95	95	92	90	86	83	87
7	79	80	81	82	80	85	91	93	90	89	86	83	85
13	73	68	66	65	64	63	75	75	67	72	77	78	70
19	79	76	77	76	74	75	85	88	87	86	84	82	81
						81. Bol'sheretskiy sovkhoz							
1	84	84	85	88	92	95	97	97	95	92	90	86	90
7	84	83	85	86	87	90	94	95	94	92	89	85	89
13	79	72	69	73	72	70	78	78	70	74	82	82	75
19	83	80	80	83	81	81	88	89	90	90	86	85	85
						83, 84. Petropavlovsk, lighthouse I, II							
1	78	75	75	78	84	91	91	90	88	77	76	79	82
7	80	79	79	79	83	89	91	91	89	78	79	80	83
13	76	73	69	72	77	84	84	82	76	64	71	76	75
19	72	70	71	76	81	86	87	86	81	71	72	74	77
						86. Ust'-Bol'sheretsk							
1	83	82	83	87	91	94	96	96	92	88	87	86	89
7	83	83	83	87	89	92	95	95	92	88	88	85	88
13	81	79	78	81	82	86	90	89	82	79	83	84	83
19	83	81	82	85	86	90	93	93	88	85	86	84	86
						87. Povorotnyy, mys							
1	65	64	67	68	74	84	86	88	85	74	65	64	74
7	65	65	67	68	74	82	86	86	82	71	65	66	73
13	62	63	64	67	72	76	77	77	74	63	61	62	68
19	63	63	67	68	76	80	84	86	82	70	64	63	72

Time	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
						88. Khodutka							
1	72	71	75	81	84	90	92	91	90	85	81	74	82
7	70	71	75	78	78	83	88	88	88	84	83	75	80
13	61	65	67	75	74	76	80	79	75	69	70	67	72
19	68	69	72	79	81	83	86	88	88	81	79	73	79
						89, 90. Ozernaya, I, II							
1	81	81	81	85	88	92	95	94	90	85	83	81	86
7	81	81	81	83	85	90	93	92	88	84	82	81	85
13	79	78	78	80	80	85	88	88	83	79	80	78	81
19	81	79	81	84	85	88	92	92	88	83	82	79	84
						92. Lopatka, mys							
1	84	84	87	90	94	97	98	98	94	87	84	81	90
7	84	84	87	90	94	97	98	98	94	86	84	81	90
13	83	82	86	89	91	93	95	95	90	82	80	80	87
19	83	83	86	90	93	96	97	97	94	86	83	81	89

TABLE 5

NUMBER OF DAYS WITH RELATIVE HUMIDITY OF THE AIR ≥30% DURING ANY OF THE OBSERVATION PERIODS AND ≥80% AT 1300 HOURS

Station No.	Station	Humidity (%)	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
1	Verkhne-Penzhino	<30	0.0	0.0	0.0	0.0	0.6	4.8	3.0	0.9	1.0	0.07	0.0	0.0	10.4
		≥80	8.9	3.9	2.2	1.2	2.5	2.0	3.9	4.5	5.3	5.7	11.4	10.2	61.7
4	Kamenskoye	<30	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.1	0.0	0.0	0.0	0.0	1.9
		≥80	14.6	10.8	12.6	8.1	6.1	1.5	5.6	7.0	6.4	9.1	14.7	13.3	109.8
7	Chemurnaut	<30	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.3
		≥80	15.4	9.3	11.7	12.9	16.1	9.2	12.0	14.2	10.4	12.7	15.4	17.1	156.4
8, 9	Apuka I, II	<30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.04	0.01	0.1	0.3
		≥80	15.7	11.2	9.7	13.0	17.3	20.4	23.2	19.8	12.2	11.1	12.3	13.1	179.0
10, 12	Tilichiki, Korf	<30	0.0	0.0	0.0	0.0	0.04	0.0	0.08	0.2	0.3	0.1	0.0	0.0	0.7
		≥80	11.1	4.8	6.9	8.2	12.2	12.6	12.5	12.4	7.8	7.5	8.9	9.0	113.9
13	Ust'-Lesnaya	<30	0.0	0.0	0.0	0.0	0.2	0.4	0.04	0.1	0.01	0.0	0.0	0.0	0.8
		≥80	16.2	10.9	11.2	12.3	11.7	14.6	18.9	19.0	12.0	10.3	13.0	15.7	165.8
17, 18	Karaginskiy ostrov I, II	<30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		≥80	19.8	18.6	18.0	15.5	18.7	17.7	18.2	17.7	15.4	13.9	20.1	19.3	212.9
21	Uka	<30	0.0	0.0	0.0	0.04	0.0	0.1	0.2	0.1	0.2	0.1	0.01	0.0	0.8
		≥80	19.0	16.2	15.4	14.2	18.6	17.8	17.3	14.3	10.2	9.9	15.3	20.7	188.9
23	Tigil'	<30	0.0	0.0	0.0	0.0	0.6	0.8	0.5	0.0	0.4	0.09	0.0	0.0	2.4
		≥80	17.0	11.2	4.4	3.5	3.1	3.5	6.5	7.5	5.9	9.4	15.2	20.0	107.2
26	Ust'-Khayryuzovo	<30	0.0	0.0	0.0	0.0	0.2	0.04	0.04	0.0	0.04	0.0	0.0	0.0	0.3
		≥80	22.4	18.0	16.5	14.4	15.0	16.0	20.2	20.3	13.0	14.9	18.0	21.6	210.3
30	Klyuchi	<30	0.0	0.0	0.04	0.2	1.0	2.0	0.04	0.2	0.3	0.4	0.08	0.0	4.3
		≥80	20.2	13.5	7.0	4.1	3.9	3.6	6.3	6.4	5.2	6.6	14.0	22.1	112.9
34	Ust'-Kamchatsk	<30	0.0	0.0	0.0	0.0	0.04	0.2	0.04	0.08	0.2	0.5	0.08	0.01	1.2
		≥80	17.6	14.9	14.3	13.5	17.4	17.2	18.6	16.5	10.6	9.1	12.0	16.9	178.6
35	Afrika, mys	<30	0.8	0.2	0.7	0.4	0.1	0.04	0.1	0.2	0.4	1.3	1.3	1.8	7.3
		≥80	16.6	15.1	16.4	17.2	22.5	23.8	25.1	21.8	14.6	10.2	11.5	15.4	210.5
38	Esso	<30	0.0	0.05	0.5	0.7	3.1	4.5	0.8	1.1	1.5	0.4	0.05	0.0	12.7
		≥80	12.3	4.4	1.3	1.1	0.7	1.6	4.4	4.7	3.0	3.9	7.7	15.8	60.9
40	Icha	<30	0.0	0.0	0.3	0.0	0.1	0.0	0.04	0.0	0.0	0.0	0.0	0.0	0.4
		≥80	14.6	11.7	9.3	12.6	17.3	21.5	25.5	25.1	17.2	13.7	15.5	15.1	199.1
45, 46	Nikol'skoye (o. Beringa) I, II	<30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		≥80	19.6	16.5	19.0	19.2	19.2	22.9	27.0	25.5	17.5	13.9	16.9	18.7	235.9
52	Mil'kovo	<30	0.0	0.1	0.3	1.6	5.8	5.2	0.1	0.2	1.4	3.0	0.2	0.0	17.9
		≥80	19.1	8.1	3.2	2.4	2.6	2.6	4.9	4.9	3.8	4.8	12.8	22.6	91.8
69	Nachiki	<30	0.0	0.0	0.09	0.09	0.3	0.7	0.2	0.08	0.3	0.2	0.0	0.0	2.0
		≥80	14.4	5.5	4.5	3.8	3.6	3.1	5.9	6.8	5.5	7.9	12.9	19.9	93.8
77, 78	Petropavlovsk, city I, II	<30	0.2	0.2	0.3	0.2	0.3	0.08	0.08	0.0	0.2	0.2	0.2	0.2	2.2
		≥80	7.3	4.7	5.6	5.6	7.3	10.4	13.6	13.2	9.2	5.7	7.0	8.0	97.6
81	Bol'sheretskiy sovkhoz	<30	0.0	0.08	0.08	0.08	0.2	0.07	0.0	0.0	0.0	0.07	0.0	0.0	0.6
		≥80	17.5	9.9	8.0	10.3	11.8	7.5	14.8	14.5	9.2	12.2	17.2	19.2	152.1
83, 84	Petropavlovsk, lighthouse I, II	<30	0.0	0.04	0.3	0.2	0.4	0.4	0.0	0.04	0.08	0.5	0.05	0.05	1.1
		≥80	14.7	9.8	9.9	12.2	16.9	21.9	22.3	19.1	14.5	8.0	11.0	15.7	176.0
86	Ust'-Bol'sheretsk	<30	0.0	0.0	0.0	0.0	0.09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09
		≥80	17.2	14.3	14.5	16.7	20.0	24.1	27.9	26.7	18.4	15.9	18.9	21.5	236.1
92	Lopatka, mys	<20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		≥80	19.3	17.5	22.5	24.1	27.7	28.4	30.1	30.3	25.5	18.2	16.2	16.7	276.5

TABLE 6

RECURRENCE OF RELATIVE HUMIDITY OF AIR AT 1300 HOURS WITHIN DIFFERENT LIMITS

Limits from	Limits to	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
						1. Verkhne-Penzhino							
10	19						1.0	0.2	0.4	0.2			
20	29					1.3	8.9	6.7	1.9	2.5	0.3		
30	39				0.3	3.8	25.7	17.5	13.8	9.6	0.6		
40	49		1.0	6.5	10.6	15.3	22.8	17.5	22.8	21.0	6.5	0.6	0.5
50	59	2.4	8.7	34.6	33.6	29.0	17.2	21.7	19.6	21.4	30.6	2.7	2.2
60	69	16.5	23.2	35.0	36.4	32.0	9.6	15.2	16.8	18.3	23.3	21.0	14.4
70	79	52.3	53.0	17.0	14.7	10.0	8.1	8.5	9.7	10.5	19.8	38.0	50.0
80	89	22.1	12.5	6.7	4.4	5.6	3.8	6.9	7.3	8.9	12.7	31.6	29.9
90	100	6.7	1.6	0.2	1.6	3.0	2.9	5.8	7.7	7.6	6.2	6.1	3.0
						4. Kamenskoye							
20	29					1.2	1.3	1.2					
30	39					2.4	13.7	10.5	4.0	4.6	1.1		
40	49			0.4	0.4	9.7	26.7	18.6	13.7	15.2	7.2	0.4	
50	59	2.0	2.2	4.4	7.1	21.1	27.9	22.6	19.8	20.5	14.3	4.1	2.5
60	69	4.8	21.2	14.5	21.7	28.4	13.7	12.5	21.0	21.7	22.2	9.2	8.3
70	79	46.0	38.5	39.9	43.7	17.8	6.7	16.5	19.0	17.5	25.8	37.4	46.2
80	89	35.9	31.9	32.3	20.8	17.4	3.3	12.5	14.5	13.7	19.4	38.5	37.3
90	100	11.3	6.2	8.5	6.3	2.0	1.7	5.6	8.0	6.8	10.0	10.4	5.7
						7. Chemurnaut							
20	29							0.6					
30	39						1.7	1.0	0.6	0.7	0.4		
40	49		3.0		1.4	2.5	7.7	2.9	2.3	5.4	3.2	0.4	1.1
50	59	5.0	6.6	8.7	6.2	3.3	14.0	12.6	9.4	13.0	10.7	4.2	2.9
60	69	21.2	19.2	18.9	17.6	15.6	19.3	18.8	21.3	22.1	20.4	17.6	14.7
70	79	24.0	38.9	34.6	31.9	26.8	26.7	25.2	20.6	24.4	24.4	26.4	26.5
80	89	29.5	21.7	27.2	34.3	36.6	20.3	21.4	24.8	20.4	22.6	33.0	35.5
90	100	20.3	10.6	10.6	8.6	15.2	10.3	17.5	21.0	14.0	18.3	18.4	19.3
						8, 9. Apuka							
20	29									0.3			
30	39	0.2	0.7	0.9	0.3	0.4	0.2	0.1	1.3	2.8	2.2	0.6	0.6
40	49	1.6	2.1	2.7	2.3	1.7	0.4	0.7	3.0	9.0	8.4	4.3	2.6
50	59	8.8	11.8	12.2	7.4	4.4	3.5	1.9	4.6	9.0	17.5	15.6	9.5
60	69	16.7	23.5	30.1	16.5	12.5	7.4	6.1	6.3	14.2	19.6	20.0	23.0
70	79	21.7	20.1	22.9	30.2	24.6	20.0	15.9	21.0	22.9	16.3	18.5	21.2
80	89	27.7	22.9	18.1	26.5	34.5	38.0	39.5	28.4	21.2	18.0	23.2	22.5
90	100	23.3	18.9	13.1	16.8	21.9	30.5	35.8	35.4	20.6	18.0	17.8	20.6
						10, 12. Tilichiki, Korf							
20	29					0.1			0.5	1.0	0.3		
30	39	0.3	0.7	0.9	0.3	1.3	1.1	0.7	2.8	6.3	3.7	0.3	0.7
40	49	2.0	5.7	4.2	2.8	4.9	4.7	4.5	5.7	10.2	9.7	3.8	2.1
50	59	16.6	23.6	20.3	15.2	11.4	8.1	9.1	12.9	18.9	22.2	20.2	17.0
60	69	22.6	31.9	27.2	28.6	18.0	16.8	16.1	15.1	17.5	23.0	24.7	25.4
70	79	21.7	20.9	25.2	25.8	24.8	27.2	29.2	22.7	20.0	17.2	21.5	25.4
80	89	21.3	11.7	13.1	16.8	27.4	33.1	28.0	26.8	16.1	15.3	18.5	16.2
90	100	15.5	5.5	9.1	10.5	12.1	9.0	12.4	13.5	10.0	8.6	11.0	13.2
						13. Ust'-Lesnaya							
20	29					0.5	0.6						
30	39	0.4	0.2	0.3	0.7	4.3	3.7	1.5	0.7	1.4	0.7		
40	49	0.7	0.4	3.1	4.8	7.9	7.9	4.0	2.6	5.5	6.3	1.8	0.9
50	59	5.9	8.2	11.9	13.8	12.9	7.6	6.9	6.9	11.8	14.4	9.4	6.5
60	69	15.6	22.6	22.1	18.9	14.6	10.8	10.3	9.0	17.0	23.6	20.1	15.1

Limits from	Limits to	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
70	79	25.0	29.0	25.7	21.4	21.9	20.8	16.5	19.1	24.5	21.9	25.5	26.9
80	89	29.4	22.5	21.6	25.6	21.3	26.7	27.8	26.6	23.3	16.7	23.0	28.3
90	100	23.0	17.1	15.3	14.8	16.6	21.9	33.0	35.1	16.5	16.4	20.2	22.3

17, 18. Karaginskiy ostrov I, II

20	29										0.2		
30	39			0.3			0.4	0.2					
40	49	0.3	1.2	0.5	0.9	0.6	1.4	1.0	1.0	1.5	1.4	1.3	0.5
50	59	1.8	2.7	3.5	5.3	3.4	2.8	5.1	4.0	4.4	6.7	5.7	4.6
60	69	9.6	10.4	16.1	17.9	12.8	12.2	9.6	11.6	15.4	20.1	10.4	11.1
70	79	23.2	19.8	21.4	24.1	23.2	24.0	23.8	25.2	26.1	26.2	14.6	20.8
80	89	30.2	32.8	29.9	30.6	31.9	38.0	36.1	32.6	31.8	25.3	32.8	30.6
90	100	34.9	33.1	28.3	21.2	28.1	21.2	24.2	25.6	20.8	20.1	35.2	32.4

21. Uka

20	29				0.1		0.1	0.3	0.3	0.6	0.3		
30	39			0.1		0.4	2.4	2.3	3.9	6.0	6.9	0.4	
40	49	0.2	0.8	1.6	5.5	2.7	5.3	7.0	9.0	11.4	16.4	3.9	0.6
50	59	2.2	4.9	11.1	13.2	8.2	6.3	8.2	11.7	12.1	14.0	10.6	3.5
60	69	6.3	9.9	18.0	16.6	13.9	9.5	9.0	11.9	14.6	14.7	18.0	9.0
70	79	28.9	27.6	19.5	17.9	15.0	16.7	17.3	16.8	21.5	15.6	16.1	20.0
80	89	33.5	30.6	25.1	20.8	19.8	28.2	29.5	23.5	20.8	14.3	23.8	32.8
90	100	28.9	26.2	24.6	25.9	40.0	31.5	26.4	22.9	13.0	17.8	27.2	34.1

23. Tigil'

20	29					1.5	2.1	1.2		0.3	0.3		
30	39			1.5	1.5	9.7	18.8	7.3	2.6	6.0	2.1		0.3
40	49	0.9	1.6	12.6	14.8	22.3	27.9	18.5	13.5	13.9	9.4	2.2	1.9
50	59	7.6	9.3	25.5	30.0	27.6	17.9	17.0	19.6	26.7	16.7	5.0	4.6
60	69	11.4	22.2	28.5	25.2	16.4	13.6	17.3	20.2	18.2	19.6	16.5	10.3
70	79	24.9	27.3	17.9	16.4	12.6	8.2	17.9	19.7	15.2	22.0	25.1	18.3
80	89	40.2	28.0	10.8	9.4	7.0	6.7	12.0	14.4	9.7	15.2	33.4	44.7
90	100	15.0	11.6	3.2	2.7	2.9	4.8	8.8	10.0	10.0	14.7	17.8	19.9

26. Ust'-Khayrozovo

20	29					0.3	0.1	0.1		0.1	0.1		
30	39				0.3	0.8	0.7	0.3	0.1	0.9	1.4		
40	49	0.3	2.0	1.8	1.1	3.6	2.0	0.8	1.7	2.8	5.4	1.1	0.5
50	59	4.0	5.4	7.9	8.3	7.2	6.0	4.3	4.0	10.3	8.1	4.8	3.9
60	69	7.2	6.1	13.7	16.6	14.3	12.7	7.5	9.2	15.7	17.1	15.1	9.7
70	79	15.8	22.0	22.3	25.4	24.8	25.2	21.9	19.6	26.7	19.7	18.1	15.2
80	89	40.9	38.0	32.6	30.8	32.2	33.2	35.9	37.5	28.8	25.7	26.9	38.0
90	100	31.8	26.5	21.7	17.5	16.8	20.1	29.2	27.9	14.7	22.5	34.0	32.7

30. Klyuchi

10	19						0.3				0.3		
20	29				0.4	2.2	5.3		0.3	0.7	0.8	0.1	
30	39	0.3	0.5	3.8	5.7	13.2	15.7	3.4	3.1	4.7	10.3	2.1	0.5
40	49	2.0	3.8	12.5	23.7	22.2	19.1	13.9	11.1	16.5	22.2	8.6	2.8
50	59	4.0	8.6	23.7	23.9	20.5	20.0	21.6	19.2	19.9	19.4	10.0	2.4
60	69	8.0	15.3	19.2	20.0	16.8	16.9	23.9	22.7	22.1	14.5	15.2	6.6
70	79	20.2	24.3	18.1	12.5	12.6	10.7	16.8	21.5	18.8	11.5	17.2	16.4
80	89	43.1	36.5	13.2	8.2	8.5	8.4	14.7	13.8	10.1	10.6	23.8	44.4
90	100	22.4	11.0	9.5	5.6	4.0	3.6	5.7	8.3	7.2	10.4	23.0	26.9

Limits from	Limits to	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
						34. Ust'-Kamchatsk							
20	29						0.4	0.1	0.1	0.1	1.9	0.1	
30	39		0.4	1.2	1.4	0.7	1.6	0.9	1.5	4.3	10.2	1.7	0.4
40	49	2.3	2.2	4.8	6.0	4.0	2.7	2.7	6.2	9.2	14.6	10.3	2.3
50	59	5.9	7.4	14.0	12.9	6.3	4.1	4.4	8.8	13.5	13.6	17.7	9.6
60	69	13.2	15.4	16.3	16.1	11.6	10.8	10.2	11.1	14.1	16.1	15.5	13.2
70	79	21.6	21.4	16.4	18.1	21.2	22.9	21.7	19.0	23.0	14.7	14.7	19.2
80	89	28.6	25.4	20.6	23.0	28.6	35.2	35.1	28.0	18.0	12.5	14.3	25.0
90	100	28.4	27.8	26.7	22.5	27.6	22.3	24.9	25.3	17.5	17.3	25.7	30.3
						35. Afrika, mys							
10	19										0.2		0.2
20	29	1.0	0.2	0.8					0.2	0.2	2.9	1.7	1.3
30	39	3.7	1.5	4.4	2.0	0.2	0.8	0.2	0.8	2.3	9.7	10.2	7.5
40	49	6.3	6.6	7.9	6.8	1.7	1.3	0.6	1.5	6.0	11.3	13.3	8.2
50	59	8.1	8.4	8.1	9.0	3.4	2.7	2.9	3.5	6.2	12.8	12.0	11.7
60	69	10.0	11.6	11.0	10.2	7.7	5.9	5.4	7.4	12.5	13.3	11.1	10.6
70	79	17.5	18.6	15.2	14.9	14.6	9.8	8.6	16.2	24.8	16.8	13.2	11.8
80	89	18.2	20.1	19.5	23.8	28.7	31.7	30.4	24.5	23.2	16.7	15.4	18.5
90	100	35.2	33.0	33.1	33.3	43.7	47.8	51.9	45.9	24.8	16.2	23.1	30.2
						38. Esso							
10	19					1.1	1.4		0.2	0.7	0.2		
20	29			1.2	1.6	9.8	10.8	1.6	2.6	4.0	1.0	0.2	
30	39	0.5	2.6	9.7	10.4	17.6	24.5	15.1	13.2	14.0	6.6	0.7	0.6
40	49	2.0	8.8	28.8	31.6	28.0	24.7	22.0	21.0	23.0	19.5	6.3	0.8
50	59	12.2	32.1	34.3	28.6	26.5	14.8	17.9	18.6	22.6	27.9	18.3	6.1
60	69	20.7	28.7	16.1	16.0	9.4	12.0	16.8	17.4	15.5	19.4	30.0	14.2
70	79	25.0	12.1	5.3	8.1	5.0	6.3	12.4	11.5	9.7	12.8	18.8	27.4
80	89	28.4	12.3	3.7	2.3	1.3	4.0	10.6	7.6	7.7	7.3	16.0	33.4
90	100	11.2	3.4	0.9	1.4	1.3	1.5	3.6	7.9	2.8	5.3	9.7	17.5
						40. Icha							
20	29			0.2		0.3		0.1					
30	39	0.4	0.7	2.7	0.2	1.2			0.3	0.2	0.8	0.5	0.9
40	49	3.3	4.7	6.1	4.3	0.8	0.2	0.1	0.3	0.9	2.8	2.2	3.9
50	59	8.4	9.7	13.8	8.5	4.3	1.3	0.7	0.9	4.8	7.3	4.7	8.2
60	69	15.9	18.5	19.1	18.1	9.4	5.1	2.2	3.1	9.6	17.6	17.3	14.2
70	79	24.5	23.4	27.3	27.6	28.1	21.3	14.4	13.8	26.7	27.1	22.9	23.0
80	89	28.3	31.3	19.5	23.8	33.9	40.8	39.5	40.4	32.1	20.6	28.0	28.9
90	100	19.2	11.7	11.3	17.5	22.0	31.3	43.0	41.2	25.7	23.8	24.4	20.9
						45, 46. Nikol'skoye (o. Beringa) I, II							
20	29				0.3								
30	39	0.2	0.2			0.6					0.1	0.3	0.1
40	49	1.4	0.5	0.4	0.9	0.4	0.3	0.4		0.4	3.0	2.5	2.0
50	59	6.1	5.9	4.0	3.2	3.1	0.7	0.6	1.4	3.1	11.8	8.0	7.4
60	69	11.6	15.6	10.1	12.0	11.4	4.9	2.3	3.9	11.2	19.4	15.0	11.3
70	79	18.4	19.4	23.5	19.8	22.9	17.8	9.5	12.4	26.9	20.7	17.2	18.8
80	89	24.7	27.4	28.2	30.0	30.4	37.4	27.7	28.1	29.9	23.1	24.4	27.0
90	100	37.6	31.0	33.8	33.8	31.2	38.9	59.5	54.2	28.5	21.9	32.6	33.4
						52. Mil'kovo							
10	19					0.7	1.0			0.2	0.5		
20	29		0.2	0.7	3.2	12.6	9.3	0.3	0.5	3.3	8.1	0.4	
30	39	0.5	2.0	9.4	17.6	26.0	21.6	7.1	6.0	16.3	26.6	6.0	1.2
40	49	3.9	4.7	23.2	29.4	22.6	22.8	18.5	18.3	24.0	20.3	11.3	3.2
50	59	4.3	8.8	25.1	24.0	16.6	18.2	28.1	26.1	16.5	12.0	10.6	3.9
60	69	6.3	21.0	18.2	11.3	8.1	11.9	17.2	20.9	14.2	10.7	12.0	4.9

Limits from	Limits to	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
70	79	23.3	34.8	12.8	6.0	5.1	6.5	12.9	12.2	12.1	6.6	16.8	14.0
80	89	43.9	19.5	7.4	4.1	4.9	4.8	9.4	10.0	9.0	5.7	25.6	52.6
90	100	17.8	9.0	3.2	4.4	3.4	3.9	6.5	6.0	4.4	9.5	17.3	20.2
						69. Nachiki							
20	29			0.3	0.4	0.6	1.6	0.6	0.1	0.9	0.5		
30	39			2.4	4.3	3.9	9.7	2.0	1.7	4.1	3.0	0.3	
40	49	1.6	3.9	13.5	17.5	14.1	21.8	11.4	7.6	12.5	12.8	2.9	1.0
50	59	6.2	20.6	29.2	27.8	27.9	21.8	19.2	16.3	22.4	19.1	14.3	3.8
60	69	19.4	34.4	26.9	21.2	26.4	18.8	25.1	24.6	22.3	22.4	19.6	12.6
70	79	26.4	21.6	12.5	16.5	14.6	15.9	22.6	27.8	18.7	15.6	19.9	18.3
80	89	34.2	13.4	9.0	8.6	8.5	8.1	14.5	14 3	14.0	13.3	21.2	45.2
90	100	12.2	6.1	6.2	3.6	4.0	2.3	4.6	7.6	5.1	13.3	21.8	19.1
						83, 84. Petropavlovsk, lighthouse I, II							
10	19						0.1				0.1		
20	29			0.5	0.3	0.6	0.8				0.7	0.2	
30	39	0.9	0.7	3.2	2.0	2.1	1.7	2.1	0.6	2.6	7.3	1.6	0.5
40	49	4.8	7.9	11.4	11.5	8.8	3.5	4.0	4.1	8.0	22.8	11.2	6.8
50	59	13.1	14.2	18.9	18.0	8.8	5.3	7.0	9.6	12.0	17.6	19.1	14.2
60	69	12.9	19.6	17.5	15.4	9.5	4.8	6.8	9.1	11.8	13.8	16.2	14.1
70	79	17.9	22.2	15.3	12.2	15.5	10.8	7.8	15.0	17.1	11.8	16.0	14.2
80	89	22.9	12.9	11.5	15.2	20.8	23.5	18.5	16.2	19.3	8.2	13.4	17.8
90	100	27.5	22.5	21.7	25.4	33.9	49.5	53.8	45.4	29.2	17.7	22.3	32.4
						86. Ust'-Bol'sheretsk							
20	29					0.3							
30	39		0.2			0.3							
40	49	0.3	0.6	1.1	0.2	0.6	0.7		0.5	0.4	1.3	0.6	0.3
50	59	3.8	4.0	5.8	3.4	3.3	1.3	0.8	1.2	3.4	6.5	3.7	2.0
60	69	12.7	15.0	17.7	13.2	8.9	3.9	1.9	3.2	12.2	16.0	11.4	10.1
70	79	26.9	29.5	27.9	27.3	22.3	13.8	7.4	8.8	22.3	24.2	20.3	17.5
80	89	27.9	29.9	27.8	28.6	37.4	39.2	29.4	28.6	33.8	26.6	24.9	35.1
90	100	28.4	20.8	19.7	27.3	26.9	41.1	60.5	57.7	27.9	25.4	39.1	35.0
						92. Lopatka, mys							
30	39			1.2									0.3
40	49	1.4									0.5	1.3	1.6
50	59	4.3	2.8	1,6	0.4	0.3		0.3		0.2	4.2	7.0	4.8
60	69	10.1	8.9	6.5	5.4	0.8	0.1	0.6	0.4	3.1	14.4	18.7	14.3
70	79	21.3	25.1	18.3	14.1	8.8	5.1	2.0	1.9	11.5	21.7	19.4	24.6
80	89	26.7	33.3	31.4	25.9	24.4	20.8	12.3	16.0	27.8	25.9	22.9	23.9
90	100	36.2	29.9	42.0	54.2	65.7	74.0	84.8	81.7	57.4	33.3	30.7	30.5

TABLE 7
AVERAGE MONTHLY AND ANNUAL AIR SATURATION DEFICIENCY (mb)

Station No	Station	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
1	Verkhne-Penshino	0.2	0.2	0.4	0.8	2.3	5.6	5.8	4.0	2.3	0.8	0.3	0.2	1.9
2	Slautnoye	0.3	0.2	0.3	0.7	2.0	5.4	5.1	3.3	2.0	0.7	0.1	0.3	1.7
4	Kamenskoye	0.3	0.2	0.3	0.7	2.0	4.5	4.8	3.2	2.2	0.9	0.1	0.3	1.6
7	Chemurnaut	0.4	0.4	0.5	0.7	1.2	2.7	2.8	2.5	2.1	1.1	0.6	0.1	1.3
8, 9	Apuka I, II	0.6	0.6	0.6	0.8	1.1	1.3	1.5	1.8	1.8	1.3	0.8	0.6	1.1
9	Topats-Olyutorskaya	0.6	0.6	0.7	0.9	1.3	1.7	2.6	2.3	2.0	1.5	0.9	0.6	1.3
10, 12	Tilichiki, Korf	0.6	0.7	0.7	0.9	1.5	2.3	2.9	2.9	2.5	1.4	0.8	0.6	1.5
13	Ust'-Leenaya	0.6	0.5	0.6	1.0	1.8	2.3	2.3	1.8	2.0	1.4	0.8	0.6	1.3
14, 15	Ossora, Karaga	0.5	0.5	0.5	0.8	1.3	2.3	2.8	2.7	2.3	1.5	0.8	0.5	1.4
16	Ust'-Palana	0.6	0.6	0.7	1.2	1.8	2.4	2.3	2.0	1.9	1.3	0.9	0.6	1.4
17	Karaginskiy ostrov	0.5	0.4	0.5	0.8	1.2	1.9	2.4	2.5	1.9	1.4	0.9	0.6	1.2
18	Karaginskiy ostrov	0.5	0.5	0.6	0.8	1.2	1.8	2.3	2.1	1.8	1.2	0.8	0.7	1.2
19	Ust'-Voyampolka	0.4	0.4	0.5	0.9	1.3	1.6	1.6	1.4	1.6	1.2	0.6	0.5	1.0
21	Uka	0.3	0.3	0.4	0.7	0.9	1.9	2.8	2.7	2.2	1.5	0.7	0.1	1.2
23	Tigil'	0.4	0.5	0.8	1.4	2.6	3.9	4.0	2.8	2.4	1.3	0.7	0.5	1.8
24	Ozernoy, mys	0.6	0.6	0.8	1.0	1.4	1.8	2.0	2.2	1.8	1.8	0.9	0.7	1.3
25	Ptichiy, ostrov	0.6	0.7	1.0	1.1	1.2	1.2	1.3	1.4	1.5	1.4	0.9	0.7	1.1
26	Ust'-Khayryuzovo	0.4	0.4	0.5	0.8	1.4	1.7	1.7	1.6	1.7	1.2	0.7	0.5	1.1
30	Klyuchi	0.4	0.5	0.8	1.6	2.9	4.9	4.7	3.7	2.7	2.1	0.9	0.4	2.1
32	Kozyrevskiy sovkhoz	0.4	0.5	0.8	1.6	3.4	5.5	5.3	3.6	2.7	2.0	0.7	0.3	2.2
34	Ust'-Kamchatsk	0.5	0.4	0.6	0.9	1.1	1.5	2.0	2.1	2.1	1.8	1.0	0.5	1.2
35	Afrika, mys	0.8	0.7	0.8	1.0	0.9	1.1	1.3	1.8	2.2	2.3	1.5	1.0	1.3
36	Kozyrevsk	0.3	0.5	0.9	1.8	3.9	5.8	5.4	3.8	2.6	1.8	0.6	0.3	2.3
38	Esso	0.4	0.5	0.8	1.5	3.0	4.9	4.6	3.7	2.7	1.1	0.6	0.1	2.0
40	Icha	0.6	0.6	0.8	1.0	1.1	1.1	1.1	1.3	1.5	1.3	0.9	0.7	1.0
45, 46	Nikol'skoye (o. Beringa) I, II	0.8	0.8	0.8	0.8	0.9	0.9	0.9	1.1	1.5	1.6	1.1	0.9	1.0
47	Dolinovka	0.3	0.5	1.0	2.1	4.1	6.1	5.7	3.9	2.7	1.9	0.6	0.3	2.4
49	Kronotskoye ozero	0.6	0.6	0.9	1.4	2.4	3.3	3.6	2.7	2.3	2.0	1.0	0.6	1.8
50	Preobrazhenskoye (o. Mednyy)	1.0	1.0	1.0	1.0	1.0	0.9	1.1	1.3	1.6	1.6	1.2	1.2	1.2
51	Mil'kovo, exp. agr. sta.	0.3	0.4	0.9	2.0	3.9	5.7	4.9	3.6	2.7	1.9	0.6	0.3	2.3
52	Mil'kovo	0.3	0.4	0.9	1.9	3.9	5.8	5.0	4.0	2.9	2.2	0.7	0.3	2.4
54	Storozh, bukhta	1.0	1.1	1.3	1.4	1.6	1.5	1.7	1.8	1.8	2.1	1.4	1.1	1.5
56	Sobolevo	0.5	0.6	0.8	1.0	1.4	1.5	1.5	1.4	1.6	1.2	0.7	0.6	1.1
57	Pushchino	0.4	0.4	0.8	1.6	2.9	5.3	4.8	3.6	2.6	1.9	0.7	0.1	2.1
59	Semlyachiki	1.3	1.3	1.4	1.6	1.7	1.7	2.1	2.7	2.6	3.1	2.1	1.4	1.9
61	Ganaly	0.4	0.6	0.8	1.7	2.9	5.0	4.0	3.1	2.4	1.5	0.8	0.4	2.0
63	Kikhchik	0.4	0.5	0.7	0.8	0.9	0.9	1.0	1.0	1.4	1.3	0.8	0.5	0.8
68	Yelizovo	0.9	1.0	1.3	1.8	2.6	3.4	3.6	3.4	2.6	2.5	1.4	0.9	2.1
69	Nachiki	0.4	0.5	0.8	1.2	2.0	3.1	3.1	2.6	2.2	1.4	0.7	0.1	1.5
70	Shipunskiy, mys	1.1	1.2	1.2	1.3	1.6	1.6	2.1	2.3	2.3	2.6	1.9	1.4	1.7
71	Kamchatskaya agro	0.9	1.1	1.3	1.9	2.5	3.3	3.4	3.3	2.6	2.3	1.4	1.0	2.1
73	Nachikinskoye ozero	0.4	0.5	0.7	1.0	1.5	2.3	2.9	2.5	2.1	1.4	0.7	0.5	1.4
76	Petropavlovsk	1.2	1.2	1.3	1.4	2.3	2.9	3.5	3.6	3.0	2.9	1.6	1.2	2.2
77, 78	Petropavlovsk, city I, II	1.2	1.3	1.5	1.9	2.3	2.6	3.1	3.2	2.9	2.7	1.8	1.3	2.2
79	Apacha	0.6	0.7	0.8	1.2	2.1	2.9	2.4	2.2	2.1	1.3	0.8	0.5	1.5
81	Bol'sheretskiy sovkhoz	0.5	0.6	0.7	1.0	1.6	2.2	1.9	1.7	1.8	1.2	0.7	0.4	1.2
83, 84	Petropavlovsk, lighthouse I, II	0.8	0.9	1.0	1.3	1.5	1.5	2.0	2.1	2.1	2.4	1.3	0.9	1.5
86	Ust'-Bol'cheretsk	0.5	0.5	0.6	0.8	1.0	1.0	0.9	1.0	1.4	1.3	0.8	0.5	0.9
87	Povorotnyy, mys	1.4	1.4	1.5	2.0	2.1	2.3	2.7	2.7	2.6	2.9	2.1	1.6	2.1
88	Khodutka	1.1	1.1	1.0	1.2	1.6	2.1	2.3	2.1	1.9	1.8	1.3	1.1	1.6
89, 90	Ozernaya I, II	0.7	0.7	0.8	1.0	1.2	1.2	1.0	1.2	1.6	1.6	1.2	1.0	1.1
92	Lopatka, mys	0.7	0.6	0.5	0.6	0.5	0.4	0.4	0.4	0.9	1.3	1.1	0.9	0.7

TABLE 8. AVERAGE MONTHLY AND ANNUAL AIR SATURATION DEFICIENCY AT DIFFERENT TIMES OF DAY (mb)

Time	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
1. Verkhne-Penzhino													
1	0.2	0.2	0.3	0.4	0.8	1.8	1.6	1.2	0.8	0.6	0.3	0.2	0.7
7	0.2	0.2	0.2	0.4	1.4	4.0	3.3	1.8	0.8	0.5	0.2	0.2	1.1
13	0.2	0.3	0.6	1.2	3.4	9.4	9.9	7.8	4.5	1.3	0.3	0.2	3.3
19	0.2	0.2	0.4	1.0	2.9	8.4	8.2	5.7	2.8	0.7	0.3	0.2	2.6
10, 12. Tilichiki, Korf													
1	0.6	0.7	0.7	0.8	1.0	1.4	1.7	1.8	1.7	1.2	0.8	0.6	1.1
7	0.6	0.7	0.6	0.8	1.3	1.9	2.2	2.2	1.7	1.1	0.8	0.6	1.2
13	0.7	0.8	0.9	1.3	2.1	3.3	4.3	4.6	4.2	2.1	1.0	0.6	2.2
19	0.6	0.7	0.7	0.9	1.5	2.6	3.3	3.0	2.5	1.4	0.8	0.6	1.5
13. Ust'-Lesnaya													
1	0.5	0.5	0.5	0.7	1.0	1.2	1.1	1.0	1.3	1.1	0.8	0.5	0.8
7	0.5	0.5	0.5	0.8	1.7	2.4	2.2	1.6	1.6	1.1	0.8	0.5	1.2
13	0.6	0.6	0.9	1.4	2.5	3.3	3.3	3.0	3.5	2.2	1.1	0.6	1.9
19	0.6	[illegible]	0.6	1.0	1.8	2.5	2.4	1.7	1.7	1.3	0.8	0.6	1.3
17, 18. Karaginskiy ostrov I, II													
1	0.5	0.4	0.4	0.7	0.9	1.4	1.8	1.9	1.6	1.3	0.8	0.5	1.2
7	0.5	0.4	0.4	0.7	1.0	1.6	2.1	2.1	1.6	1.2	0.8	0.6	1.1
13	0.5	0.5	0.6	1.0	1.4	2.4	3.2	3.2	2.7	1.8	0.9	0.6	1.6
19	0.5	0.4	0.4	0.8	1.2	2.2	2.8	2.8	1.9	1.4	0.8	0.5	1.3
23. Tigil'													
1	0.4	0.3	0.4	0.7	0.9	1.1	1.2	0.9	0.9	0.8	0.6	0.4	0.7
7	0.4	0.3	0.4	0.8	1.5	2.1	1.9	1.0	0.9	0.7	0.6	0.4	0.9
13	0.6	0.6	1.3	2.4	4.5	7.8	8.5	6.9	5.7	2.5	1.0	0.6	3.5
19	0.5	0.4	0.7	1.5	2.7	5.0	5.0	3.3	2.3	1.2	0.6	0.5	2.0
26. Ust'-Khayryuzovo													
1	0.4	0.3	0.5	0.5	0.7	0.7	0.7	0.7	0.8	0.9	0.6	0.5	0.6
7	0.4	0.4	0.5	0.6	1.1	1.3	1.2	0.9	0.8	0.8	0.6	0.5	0.8
13	0.5	0.6	0.9	1.3	2.2	2.8	3.1	3.1	3.4	2.1	0.9	0.6	1.8
19	0.4	0.4	0.6	0.8	1.5	1.9	1.9	1.7	1.5	1.0	0.7	0.5	1.1
30. Klyuchi													
1	0.3	0.4	0.5	1.0	1.5	2.0	2.2	1.7	1.4	1.5	0.8	0.4	1.1
7	0.3	0.4	0.4	0.9	1.9	2.9	2.8	1.9	1.2	1.3	0.6	0.3	1.2
13	0.4	0.6	1.3	2.5	4.8	8.2	7.9	6.9	5.4	3.4	1.2	0.4	3.6
19	0.4	0.5	1.0	1.9	3.6	6.6	6.0	4.3	2.6	2.3	0.9	0.4	2.5
34. Ust'-Kamchatsk													
1	0.4	0.4	0.4	0.6	0.6	0.6	1.0	1.0	1.1	1.2	0.8	0.5	0.7
7	0.4	0.4	0.4	0.6	0.9	1.3	1.7	1.5	1.2	1.1	0.8	0.5	0.9
13	0.5	0.6	0.9	1.4	1.7	2.7	3.4	4.1	4.1	3.1	1.4	0.7	2.0
19	0.5	0.5	0.6	0.9	1.0	1.5	1.8	1.9	1.8	1.7	1.0	0.5	1.1
38. Esso													
1	0.3	0.3	0.3	0.7	1.0	1.1	1.0	0.7	0.7	0.7	0.4	0.4	0.6
7	0.3	0.3	0.3	0.7	1.9	2.8	2.1	1.2	0.8	0.6	0.4	0.3	1.0
13	0.6	1.0	1.7	2.8	5.6	9.1	9.4	8.5	6.6	3.1	1.2	0.6	4.2
19	0.3	0.4	0.9	1.7	3.9	6.5	6.0	4.4	2.6	1.3	0.5	0.4	2.4
45, 46. Nikol'skoye (o. Beringa) I, II													
1	0.7	0.7	0.7	0.7	0.6	0.5	0.5	0.7	1.1	1.3	1.0	0.9	0.8
7	0.7	0.7	0.7	0.7	0.8	0.7	0.6	0.9	1.3	1.3	1.0	0.9	0.9
13	0.8	0.9	0.9	1.0	1.4	1.5	1.5	1.8	2.3	2.1	1.3	1.0	1.4
19	0.7	0.8	0.7	0.8	0.9	0.9	0.9	1.0	1.3	1.4	1.1	0.9	1.0

Time	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
						52. Mil'kovo							
1	0.2	0.2	0.4	0.9	1.4	1.7	1.4	1.2	0.9	1.0	0.4	0.3	0.8
7	0.2	0.2	0.3	0.8	2.3	3.1	2.4	1.5	0.8	0.8	0.3	0.2	1.1
13	0.4	0.7	1.7	3.3	6.4	10.2	9.7	8.9	7.4	4.7	1.3	0.5	4.6
19	0.3	0.4	1.1	2.6	5.4	8.2	7.0	4.5	2.8	2.2	0.6	0.3	3.0
						69. Nachiki							
1	0.3	0.4	0.4	0.6	0.8	0.7	0.7	0.7	0.8	0.8	0.5	0.4	0.6
7	0.3	0.3	0.4	0.7	1.2	1.3	1.2	0.9	0.8	0.8	0.5	0.4	0.7
13	0.7	0.9	1.4	2.2	3.7	6.6	7.1	6.2	5.2	3.0	1.1	1.0	3.3
19	0.4	0.5	0.8	1.4	2.3	3.8	3.4	2.7	1.8	1.4	0.6	0.4	1.6
						77, 78. Petropavlovsk, city I, II							
1	1.2	1.2	1.3	1.6	1.7	1.6	1.9	2.0	2.0	2.3	1.6	1.3	1.6
7	1.1	1.1	1.2	1.5	1.8	1.8	2.1	2.1	1.8	2.1	1.5	1.2	1.6
13	1.3	1.5	1.9	2.5	3.3	4.0	4.8	5.0	4.7	3.9	2.1	1.5	3.0
19	1.3	1.4	1.6	1.9	2.5	3.0	3.7	3.5	3.2	2.8	1.8	1.4	2.3
						81. Bol'sheretskiy sovkhoz							
1	0.4	0.4	0.4	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5
7	0.4	0.4	0.4	0.7	1.0	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.6
13	0.7	1.0	1.4	1.8	2.9	4.8	4.2	4.6	4.7	2.7	1.1	0.7	2.6
19	0.5	0.6	0.7	1.1	1.5	2.4	2.0	1.7	1.2	0.9	0.7	0.5	1.2
						83, 84. Petropavlovsk, lighthouse I, II							
1	0.7	0.8	0.9	1.1	1.1	1.0	1.3	1.4	1.4	1.8	1.2	0.8	1.1
7	0.7	0.7	0.7	1.1	1.2	1.2	1.3	1.4	1.2	1.7	1.0	0.7	1.1
13	0.8	1.0	1.3	1.7	2.0	2.1	2.9	3.3	3.5	3.5	1.6	0.9	2.0
19	1.0	1.1	1.2	1.4	1.6	1.7	2.4	2.5	2.4	2.6	1.5	1.0	1.7
						86. Ust'-Bol'sheretsk							
1	0.5	0.5	0.5	0.6	0.7	0.6	0.5	0.6	0.9	1.0	0.6	0.5	0.6
7	0.5	0.4	0.5	0.6	0.9	0.8	0.7	0.7	0.9	1.0	0.6	0.5	0.7
13	0.6	0.7	0.9	1.1	1.5	1.5	1.4	1.7	2.5	2.0	1.0	0.6	1.3
19	0.5	0.6	0.6	0.8	1.0	1.0	1.0	1.0	1.4	1.3	0.7	0.5	0.9
						92. Lopatka, mys							
1	0.7	0.6	0.5	0.5	0.4	0.2	0.2	0.2	0.6	1.1	1.0	0.9	0.6
7	0.7	0.6	0.5	0.5	0.4	0.3	0.2	0.3	0.7	1.2	1.0	0.9	0.6
13	0.7	0.7	0.6	0.6	0.6	0.7	0.6	0.7	1.3	1.7	1.3	0.9	0.9
19	0.8	0.6	0.6	0.5	0.4	0.3	0.3	0.3	0.7	1.2	1.1	0.9	0.6

SECTION 2

ATMOSPHERIC PRECIPITATION

TABLE 1

AVERAGE AMOUNT OF PRECIPITATION REDUCED TO PRECIPITATION GAUGE READINGS (mm)

Station No.	Station	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XI—III	IV—X	Year
1	Verkhne-Penzhino	32	13	13	13	12	21	46	38	23	22	23	24	105	175	280
2	Sleutnoye	29	18	16	16	17	21	53	46	31	29	25	27	115	213	328
3	Oklan	*37*	*20*	*19*	*19*	*18*	*25*	*51*	*62*	*29*	*31*	*23*	*22*	*121*	*235*	*356*
4	Kamenskoye	36	20	19	18	17	24	48	58	28	29	23	22	120	222	342
5	Talovskiy sovkhoz	*37*	*21*	*20*	*19*	*18*	*26*	*50*	*60*	*29*	*30*	*24*	*23*	*125*	*232*	*357*
6	Natal'ya													*398*	*526*	*924*
7	Chemurnaut	52	48	40	29	39	22	44	64	50	58	58	52	250	306	556
9	Apuka II	69	42	46	41	26	26	62	60	41	52	38	48	243	308	551
10	Tilichiki	46	20	28	24	17	31	55	60	45	61	81	51	226	293	519
11	Topata-Olyutorskaya	79	53	60	64	55	41	79	86	74	82	78	72	342	481	823
12	Korf	43	15	27	36	26	22	51	50	40	53	34	39	158	278	436
13	Ust'-Lesnaya	18	8	9	13	16	21	52	62	50	61	37	22	94	275	369
14, 15	Ossora, Karaga	47	41	38	41	49	39	65	75	60	74	73	57	256	403	659
16	Ust'-Palana	18	9	13	21	18	31	57	66	51	65	54	26	120	309	429
17, 18	Karaginskiy ostrov I, II	72	68	50	33	27	20	44	47	41	54	74	60	324	266	590
19	Ust'-Voyampolka	18	8	13	22	20	33	60	70	54	71	44	25	108	330	438
20	Korn	*17*	*8*	*12*	21	19	31	58	67	52	66	*49*	*24*	*110*	314	*424*
21	Uka	47	44	32	22	26	29	52	57	41	56	51	46	220	283	503
22	Napana	21	13	15	23	25	38	58	72	54	57	34	28	111	327	438
23	Tigil[1]	22	14	16	21	22	35	53	66	49	52	34	28	114	298	412
24	Ozernoy, mys	78	64	47	59	69	59	65	86	74	98	84	72	345	510	855
25	Ptichiy ostrov	*20*	*10*	*12*	20	20	27	54	72	51	70	*47*	*34*	*123*	314	*437*
26	Ust'-Khayryuzovo	23	11	14	24	24	31	64	84	60	82	55	40	143	369	512
27	Khayryuzovo	22	11	14	25	25	32	66	86	62	84	52	38	137	380	517
28	Belogolovoye	*24*	*12*	*15*	23	23	30	61	80	57	78	*57*	*41*	*149*	352	*501*
29	Kharchino	*89*	*55*	*42*	*31*	*34*	*35*	*66*	*71*	*53*	*58*	*89*	*97*	*372*	*348*	*720*
30	Klyuchi	60	48	40	27	29	30	56	61	45	50	52	64	264	298	562
31	Bol'shiye Shcheki	77	62	51	35	37	38	71	78	57	64	66	82	*338*	380	*718*
32	Kozyrevskiy sovkhoz	43	33	22	24	25	29	56	64	47	38	41	50	189	283	472
33	Nizhne-Kamchatsk	88	79	55	46	40	33	61	69	58	70	71	84	377	377	754
34	Ust'-Kamchatsk	82	74	51	39	34	28	52	58	49	59	66	78	351	319	670
35	Afrika, mys	*96*	*60*	*49*	78	70	57	77	81	72	106	*79*	*83*	*367*	541	*908*
36	Kozyrevsk	36	28	18	20	21	24	46	53	39	32	34	42	158	235	

37	Moroshechnoye	*21*	*12*	*15*	*19*	*15*	*18*	*50*	*55*	*25*	*68*	*48*	*21*	*117*	*250*	*367*
38	Esso	28	18	14	13	18	32	64	58	32	33	29	31	123	250	373
39	Sredne-Kamchatsk	26	17	14	14	18	27	46	47	29	24	27	28	112	205	317
40	Icha	25	15	20	32	38	37	69	81	67	117	79	46	176	411	620
41	Icha, post	26	16	21	31	37	36	67	82	66	114	74	48	185	433	678
42	Tolbachik	27	14	13	17	22	24	47	49	24	25	30	29	113	208	321
43	Shchapino	30	19	15	14	18	26	46	47	29	21	30	32	126	201	330
44	Nizhne-Oblukovino	*30*	*19*	*20*	*34*	*35*	*32*	*68*	*90*	*69*	*115*	*78*	*45*	*192*	*443*	*635*
45, 46	Nikol'skoye (o. Beringa)	61	35	43	39	37	32	50	68	56	77	79	59	277	359	636
47	Dolinovka	33	21	17	18	22	34	58	67	36	31	34	36	140	259	399
48	Krutogorovo	26	14	20	30	39	38	69	82	73	111	67	47	174	442	616
49	Kronotskoye ozero	40	21	21	23	24	27	39	38	33	34	36	50	168	218	386
50	Preobrazhenskoye (o. Mednyy)	136	89	100	75	68	51	74	101	101	145	148	125	598	615	1213
51	Mil'kovo, exp. erg. sta.	52	39	28	19	25	31	59	57	40	31	50	63	232	262	494
52	Mil'kovo	58	40	29	22	27	37	67	53	40	38	45	63	235	284	519
53	Verkhne-Kamchatsk	54	39	25	24	23	38	51	60	45	39	42	50	210	280	490
54	Storozh, bukhta	100	79	78	64	54	44	56	74	88	106	115	120	492	486	978
55	Sharomy	64	44	32	22	28	40	71	56	43	40	50	70	260	300	560
56	Sobolevo	33	16	21	41	55	50	91	109	84	140	88	58	216	570	786
57	Pushchino	110	70	54	39	35	31	64	61	45	75	66	96	390	350	740
58	Sobolevskiy sovkhoz	35	17	22	42	56	51	93	111	86	143	92	61	227	582	809
59	Semlyachiki	130	66	93	100	106	71	86	91	112	120	105	156	550	689	1239
60	Privol'noye	32	15	20	41	55	50	92	109	84	141	85	56	208	572	780
61	Ganaly	38	23	24	32	33	36	61	59	72	92	56	63	205	385	590
62	Shakhty	*53*	*34*	*36*	*39*	*39*	*43*	*77*	*90*	*92*	*132*	*120*	*98*	*341*	*512*	*853*
63	Kikhchik	37	19	32	46	42	43	75	86	81	119	101	74	263	492	755
64	Kikhchik, post	39	20	34	52	46	48	83	96	90	133	106	78	277	548	825
65	Malka	45	22	29	54	50	41	74	76	95	139	105	63	264	529	793
66	Koryaki	56	23	34	57	50	37	59	50	73	96	79	63	255	422	677
67	Nachikinskiy sovkhoz	49	37	44	51	46	38	76	84	95	131	77	68	275	521	796
68	Yelizovo	38	28	30	35	50	48	70	70	73	66	60	54	210	412	622
69	Nachiki	61	46	56	45	41	34	67	75	85	117	97	85	345	461	806
70	Shipunskiy, mys	*163*	*96*	*136*	*125*	*120*	*93*	*150*	*102*	*129*	*148*	*132*	*139*	*666*	*867*	*1533*
71	Kamchatskaya agro	51	37	40	48	69	66	96	96	100	90	80	72	280	565	845
72	Perevesnyy	42	21	31	46	54	48	104	112	107	143	109	69	272	614	886
73	Nachikinskoye ozero	78	57	55	46	41	40	75	80	89	102	98	78	366	473	839
74	Dal'nyy sovkhoz	73	46	49	51	59	51	95	66	116	93	87	82	337	551	888
75	Nikolayevka	84	32	64	87	90	55	100	66	80	118	90	80	350	596	946
77	Petropavlovsk, city I	111	88	174	107	76	58	73	106	102	143	182	115	670	665	1335
78	Petropavlovsk, city II	*91*	*72*	*143*	*87*	*62*	*47*	*60*	*88*	*83*	*117*	*148*	*94*	*548*	*544*	*1092*
79	Apacha	43	26	33	35	41	41	85	83	82	114	82	64	248	481	729
80	Paratunka	107	41	73	82	91	48	83	70	111	104	97	115	433	589	1022

Station No.	Station	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XI—III	IV—X	Year
81	Bol'sheretskiy sovkhoz	*43*	*19*	*30*	36	42	45	86	92	78	120	*83*	*67*	*242*	499	*741*
82	Nachilovo	*50*	*28*	*32*	32	38	40	77	83	70	109	*89*	*71*	*273*	448	*721*
83, 84	Petropavlovsk, lighthouse I, II	*108*	*81*	*167*	110	66	64	93	96	93	115	*174*	*111*	*643*	637	*1280*
85	Bol'sheretsk	43	19	30	36	43	46	86	92	78	121	84	68	244	502	746
86	Ust'-Bol'sheretsk	52	30	33	34	40	42	81	87	73	113	94	78	287	470	757
87	Povorotnyy, mys	*150*	*80*	*97*	*97*	*77*	*71*	*147*	*127*	*138*	*170*	*192*	*166*	*685*	*827*	*1512*
88	Khodutka	123	83	144	123	104	63	119	79	122	154	165	151	666	764	1430
89	Ozernaya I	91	56	61	49	40	42	80	82	67	93	113	105	426	453	879
90	Ozernaya II	*79*	*47*	*63*	*44*	*36*	*38*	*72*	*74*	*60*	*83*	*63*	*66*	*318*	*407*	*725*
91	Paushetskiye klyuchi	*220*	*124*	*232*	*216*	*190*	*90*	*127*	*90*	*219*	*360*	*341*	*293*	*1210*	*1292*	*2502*
92	Lopatka, mys	*100*	*70*	*93*	69	58	51	82	70	88	100	*154*	*106*	*523*	518	*1017*

NOTE: In Tables 1 and 1a, the data for the Tigil' station (1949-65) are combined with the data of the Tigil' post (1946-49).

TABLE 1a
AVERAGE AMOUNT OF PRECIPITATION WITH CORRECTIONS FOR PRECIPITATION GAUGE READINGS (mm)

Station No.	Station	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XI—III	IV—X	Year
1	Verkhne-Penzhino	46	20	20	20	17	26	52	42	27	31	34	36	156	215	371
2	Slautnoye	56	33	29	31	28	27	61	52	35	44	46	48	212	278	490
4	Kamenskoye*					28	31	56	66	36	46				263	
7	Chemurnaut*					63	29	53	73	60					278	
9	Apuka*					37	32	71	68	46					254	
10	Tilichiki	90	41	56	40	23	38	61	74	51	82	143	90	420	369	789
11	Topata-Olyutorskaya*					89	67	128	138	120	133				675	
12	Korf*				72	42	27	58	56	47					302	
13	Ust'-Leanaya	42	17	20	24	25	26	60	71	60	92	76	50	205	358	563
14, 15	Ossora	74	64	60	64	77	61	103	118	94	117	114	89	401	634	1035
16	Ust'-Palana	39	17	27	40	28	38	66	76	60	101	80	54	217	409	626
17, 18	Karaginskiy ostrov					41	24	48	52	48					213	
19	Ust'-Voyampolka	40	17	28	37	29	40	69	80	63	103	83	56	224	421	645
20	Korn*					28	37	67	76	61					269	
21	Uka	90	86	59	36	34	37	62	68	51	72	81	91	407	360	767
22	Napana	33	22	27	32	33	45	64	80	60	71	58	48	188	385	573
23	Tigil'	33	20	25	30	29	41	59	73	54	65	52	42	172	351	523
24	Ozernoy, mys	177	147	98	99	93	67	70	93	84	124	141	165	728	630	1358
25	Ptichiy ostrov					31	33	63	83	59					269	
26	Ust'-Khayryusovo	49	24	31	43	35	37	75	97	69	122	100	83	287	479	766
27	Khayryusovo	51	25	32	45	37	39	77	99	71	125	103	85	296	493	789
28	Belogolovoye*					34	36	71	92	66					299	
30	Klyuchi	115	90	79	46	39	36	64	68	51	64	92	116	492	368	860
31	Bol'shiye Shcheki	147	115	101	60	50	45	81	87	65	82	118	149	630	470	1100
32	Kozyrevskiy sovkhoz	68	55	38	37	34	34	63	71	53	47	63	79	303	339	642
33	Nizhne-Kamchatsk	176	158	106	72	52	39	68	76	64	85	110	163	713	456	1169
34	Ust'-Kamchatsk	166	147	98	61	44	33	58	64	54	72	102	151	664	386	1050
35	Afrika, mys				145	94	67	87	90	81	121				685	
36	Kozyrevsk	53	44	31	30	29	28	52	58	43	38	47	59	234	278	512
38	Esso	37	25	20	18	24	37	70	64	38	40	41	48	171	291	462

Station No.	Station	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XI - III	IV - X	Year
39	Sredne-Kamchatsk	30	21	17	18	22	31	50	51	32	28	31	33	132	232	364
40	Icha	50	30	42	54	56	44	81	96	77	170	125	102	319	578	927
41	Icha, post	49	30	40	52	55	43	78	94	76	165	122	97	338	563	901
42	Tolbachik	30	21	18	22	27	28	51	53	26	29	31	31	134	236	370
43	Shchapino	35	23	20	18	22	30	50	51	32	28	35	37	150	231	381
45, 46	Nikol'skoye* (o. Beringa)					49	41	60	78	64					292	
47	Dolinovka	38	26	22	23	27	38	63	65	40	36	39	42	167	292	459
48	Krutogorovo	50	31	40	51	58	46	80	94	84	161	124	99	311	574	918
49	Kronotskoye ozero	53	27	28	29	28	30	42	41	35	39	48	67	223	211	367
50	Preobrazhenskoye* (o. Mednyy)					92	61	83	113	113					462	
51	Mil'kovo, exp. agr. sta.	61	48	38	25	31	35	65	63	41	37	61	75	283	300	583
52	Mil'kovo	70	50	39	32	34	42	73	58	44	46	56	76	291	329	620
53	Verkhne-Kamchatsk	65	49	34	34	29	44	56	66	50	48	52	60	260	327	587
54	Storozh, bukhta	185	146	145	93	59	50	60	80	93	113	172	217	865	518	1413
55	Sharomy	72	52	49	31	35	46	78	62	48	49	58	78	300	319	619
56	Sobolevo	51	26	36	66	72	58	104	122	93	178	126	92	331	693	1024
57	Pushchino	150	98	83	60	45	37	71	67	50	95	93	127	551	425	976
58	Sobolevskiy sovkhoz	52	27	37	67	73	60	106	124	95	182	129	91	339	707	1046
59	Semlyachiki				179	136	82	94	102	121	150				861	
60	Privol'noye	52	26	36	66	72	58	105	122	93	179	127	93	331	695	1029
61	Ganaly	61	36	39	47	43	42	67	64	81	112	78	97	311	456	767
63	Kikhchik	74	38	69	78	63	52	87	98	93	200	186	167	531	671	1205
64	Kikhchik, post	83	43	77	88	69	59	96	109	101	223	208	186	598	748	1346
65	Malka	66	32	47	80	64	48	82	83	101	171	146	92	383	632	1015
66	Koryaki	68	28	42	79	58	41	64	54	78	108	97	77	312	488	800
67	Nachikinskiy sovkhoz	102	77	92	78	59	44	84	92	101	161	160	141	572	622	1194
68	Yelizovo	57	41	43	48	58	54	76	76	77	75	77	78	296	464	760
69	Nachiki	90	68	91	68	53	39	74	83	93	141	135	121	508	551	1062
71	Kamchatskaya agro	67	49	56	66	79	73	104	104	107	103	98	98	368	636	1001
72	Perevesnyy	66	29	45	73	71	58	118	125	118	190	127	102	369	753	1122
73	Nachikinskoye ozero	110	82	87	66	52	46	82	87	97	125	132	108	519	556	1075
74	Dal'niy sovkhoz	78	55	58	70	68	58	103	72	123	105	97	95	383	599	982
75	Nikolayevka	125	47	92	120	101	62	109	71	85	133	115	115	491	681	1178
77	Petropavlovsk, city I	146	121	242	138	88	66	79	115	108	160	213	141	863	751	1617
79	Apacha	76	46	58	55	52	48	94	91	90	134	113	114	408	563	971
80	Paratunka	152	59	105	113	106	54	90	76	118	117	139	165	620	671	1291
81	Bol'sheretskiy sovkhoz*					55	54	97	103	86					385	
82	Nachilovo				51	50	48	87	94	77	144				550	
83, 84	Petropavlovsk, lighthouse*					96	77	108	111	106					498	
85	Bol'sheretsk	90	39	65	70	59	57	99	106	88	142	152	154	500	621	
86	Ust'-Bol'sheretsk*					61	52	94	99	83					389	1121
88	Khodutka	219	149	255	194	128	72	132	88	132	179	208	231	1062	925	
89	Osernaya*					48	50	90	92	74					351	1987
92	Lopatka, mys				110	71	61	93	78	97	119				629	

NOTE: The asterisk (*) indicates that the amount of precipitation for the warm period was calculated for 5-6 months.

TABLE 2. SOLID (s), LIQUID (l) AND MIXED (m) PRECIPITATION IN PERCENTS OF THE TOTAL AMOUNT OF PRECIPITATION

Type of precipitation	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
1. Verkhne-Penzhino													
s	96	100	96	99	83	3			2	83	99	97	56
l			4	•	2	80	100	100	57	9			38
m	4	•		1	15	17			31	8	1	3	6
4. Kamenskoye													
s	96	99	96	98	54	•			1	70	85	95	50
l				1	21	85	100	100	76	18		•	44
m	4	1	4	1	25	15			23	12	15	5	6
7. Chemurnaut													
s	90	98	94	95	49	1			•	38	92	84	55
l				•	5	95	100	100	98	33		•	34
m	10	2	6	5	46	4			2	29	8	16	11
12. Korf													
s	83	92	96	88	47	•			1	31	73	87	40
l					12	99	100	100	99	31	•	4	45
m	17	8	4	12	41	1			•	38	27	9	15
13. Ust'-Lesnaya													
s	98	100	100	82	30				2	39	87	94	33
l				2	22	90	100	100	91	30	1	•	56
m	2			16	48	10			7	31	12	6	11
17, 18. Karaginskiy ostrov I, II													
s	90	100	95	95	54				2	24	70	93	60
l	1		•	•	13	97	100	100	95	45	6	•	29
m	9	•	5	5	33	3			3	31	24	7	11
21. Uka													
s	94	96	98	91	45	2				28	67	93	48
l				2	15	89	100	100	99	49	6	1	42
m	6	4	2	7	40	9			1	23	27	6	10
23. Tigil'													
s	99	96	100	75	27					49	93	95	40
l		1		11	45	91	100	100	95	21	1		52
m	1	3	•	14	28	9			5	30	6	5	8
26. Ust'-Khayryuzovo													
s	99	99	98	71	25	1			1	31	75	94	35
l	1		1	5	37	90	100	100	95	37	13	•	54
m	•	1	1	24	38	9			4	32	12	6	11
30. Klhuchi													
s	95	98	100	86	37	1			1	29	79	90	52
l	•			•	20	91	100	100	98	32	6	•	38
m	5	2	•	14	43	8			1	39	15	10	10
34. Ust'-Kamchatsk													
s	84	88	94	77	41	•			•	23	50	83	48
l	4	2		2	16	90	100	100	99	52	11	5	37
m	12	10	6	21	43	10			1	25	39	12	15
35. Afrika, mys													
s	71	78	96	77	40				•	13	49	85	48
l	1	•		1	20	87	100	100	100	57	15	1	33
m	28	22	4	22	40	13			•	30	36	14	19

Type of precip-itation	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
38. Esso													
s	100	100	100	94	42	1			3	68	97	98	45
l				1	14	89	100	100	82	14	•	1	49
m				5	44	10			15	18	3	1	6
40. Icha													
s	98	98	100	72	22	1			2	20	70	92	33
l				8	34	89	100	100	98	43	12	3	53
m	2	2	•	20	44	10			•	37	18	5	14
45, 46. Nikol'skoye (o. Beringa) I, II													
s	83	82	87	53	17					10	40	64	39
l	4	1	1	10	45	85	100	100	99	70	19	11	43
m	13	17	12	37	38	15			1	20	41	25	18
50. Preobrazhenskoye (o. Mednyy)													
s	79	82	82	64	19					10	46	74	45
l	5	2	1	7	34	92	100	100	98	70	20	9	38
m	16	16	17	29	47	8			2	20	34	17	17
52. Mil'kovo													
s	97	100	100	93	29					54	90	91	54
l		•		1	29	89	100	100	96	28	•	2	40
m	3		•	6	42	11			4	18	10	7	6
69. Nachiki													
s	100	100	98	86	53	1			1	31	76	92	51
l			2	3	16	88	100	100	94	35	4		38
m				11	31	11			5	34	20	8	11
77. Petropavlovsk, city I													
s	90	77	86	78	23					8	41	66	42
l				1	35	96	100	100	100	66	18	2	38
m	10	23	14	21	42	4				26	41	32	20
83, 84. Petropavlovsk, lighthouse I, II													
s	86	96	98	82	48					20	35	78	43
l				1	22	93	100	100	100	64	38	•	44
m	14	4	2	17	30	7				16	27	22	13
86. Ust'-Bol'sheretsk													
s	98	94	87	57	12					8	60	96	31
l	•	•	•	8	45	96	100	100	98	63	11	2	55
m	2	6	13	35	43	4			2	29	29	5	14
92. Lopatka, mys													
s	90	97	91	54	29	1				5	41	71	42
l	•	•	•	5	29	90	100	100	100	72	26	2	41
m	10	3	9	41	42	9				23	33	27	17

Note. The point (•) designates less than 0.5% recurrence.

TABLE 3. GREATEST AND SMALLEST MONTHLY AND ANNUAL AMOUNT OF PRECIPITATION (mm) WITH DIFFERENT PROBABILITY

Month	Greatest amount, probability (%)			Observed maximum		Smallest amount, probability (%)			Observed minimum	
	10	5	2	mm	year or number of years	80	90	95	mm	year or number of years
1. Verkhne-Penzhino										
I	80	88	95	88	1956	10	6	4	1	1948
II	26	29	31	29	1949	5	3	2	2	1964
III	29	35	43	39	1960	4	2	1	3	1954, 1961
IV	30	36	44	41	1963	4	2	1	1	1947
V	28	32	34	30	1964	4	2	1	0	1946
VI	43	49	57	52	1946	8	4	2	2	1954
VII	87	98	114	108	1963	22	10	4	3	1954
VIII	67	73	80	74	1956	21	14	8	4	1954
IX	50	65	78	78	1946	7	3	0	0	1963
X	44	52	60	52	1957	10	6	3	2	1947
XI	53	66	77	77	1946	8	4	3	1	1947
XII	46	52	58	52	1964	10	6	2	1	1953
Year	345	370	395	366	1946	246	210	168	110	[illegible]
9. Apuka II										
V	48	67	98	99	1964	5	2	1	0	1950
VI	45	51	59	55	1950	13	7	3	1	1947
VII	126	137	148	142	1965	22	14	10	9	1964
VIII	106	119	133	125	1961	30	18	12	10	1962
IX	123	158	200	192	1946	14	6	2	2	1951, 1957
X	76	100	146	123	1952	16	10	6	4	1954
14, 15. Ossora, Karaga										
I	80	106	132	124	1956	24	18	14	11	1964
II	84	120	180	236	1965	15	12	8	9	1935, 1939
III	62	67	72	70	1962	21	14	11	10	1945
IV	82	96	114	122	1939	22	14	8	6	1944, 1958
V	80	91	104	101	1956	18	8	4	2	1953, 1955
VI	71	79	87	83	1944	18	11	6	4	1956
VII	118	134	152	151	1963	30	17	9	4	1952
VIII	142	168	188	194	1964	38	26	18	12	1962
IX	114	130	148	146	1939	26	14	5	0	1957
X	143	159	172	160	1951	32	24	16	1	1954
XI	176	210	249	221	1937	37	28	22	24	1960
XII	99	112	126	122	1937	29	19	10	10	1961
Year	870	940	1040	1003	1937	550	520	500	500	1954
19. Ust'-Voyampolka										
I	38	52	77	66	1956	6	4	2	2	1938, 1953
II	16	18	21	20	1957	4	3	2	2	1953
III	26	27	28	26	1937, 1942	5	3	2	1	1941
IV	55	64	71	69	1962	9	6	5	5	1951
V	35	43	57	56	1949	8	6	4	3	1946
VI	69	84	100	99	1955	11	6	4	4	1945
VII	102	116	136	133	1943	34	21	12	2	1964
VIII	120	137	166	160	1950	40	26	17	10	1962
IX	106	128	177	173	1950	20	10	5	3	1963
X	102	114	126	125	1944	40	28	18	8	1936
XI	76	79	81	94	1937	26	20	16	13	1938
XII	45	50	53	52	1957	12	8	5	3	1961
Year	570	620	680	667	1950	340	310	290	283	1951

Month	Greatest amount, probability (%)			Observed maximum		Smallest amount, probability (%)			Observed minimum	
	10	5	2	mm	year or number of years	80	90	95	mm	year or number of years
21. Uka										
I	78	89	103	101	1959	29	20	13	15	1953
II	92	118	148	140	1955	20	14	9	8	1942
III	63	73	86	82	1938	17	11	8	6	1945
IV	47	53	62	60	1939	12	8	6	8	1941, 1944, 1947
V	51	62	76	70	1956	10	6	4	4	1946, 1955
VI	59	74	95	91	1952	12	7	4	3	1957
VII	108	116	124	116	1950	20	14	12	12	1956, 1957
VIII	88	98	110	108	1963	37	26	18	12	1951
IX	68	75	84	82	1950	23	14	7	1	1957
X	90	106	125	122	1940	28	20	15	11	1947
XI	108	142	190	185	1939	27	19	14	12	1958
XII	74	82	92	90	1949	24	15	10	6	1940
Year	649	710	800	797	1950	425	369	312	349	1947
26. Ust'-Khayryuzovo										
I	44	51	59	58	1964	9	5	3	2	1934
II	21	25	32	38	1949	6	4	2	1	1964
III	26	33	42	50	1955	7	5	3	2	1943
IV	40	46	53	51	1939	12	8	5	3	1944
V	39	44	52	50	1959	10	6	3	2	1935
VI	59	68	79	78	1952	11	6	3	2	1935
VII	114	134	158	157	1955	30	18	10	3	1964
VIII	138	155	178	177	1940	43	28	18	9	1959
IX	102	130	188	188	1960	30	20	12	6	1951
X	120	136	154	159	1963	42	30	22	14	1936
XI	92	106	122	128	1950	36	27	22	13	1944
XII	74	88	104	103	1949	19	11	7	5	1956
Year	668	727	800	794	1950	397	362	340	318	1937
30. Klyuchi										
I	106	112	116	116	1954	30	20	15	12	1932
II	97	118	146	151	1910	17	9	6	6	1919
III	68	87	132	165	1960	18	12	8	3	1945
IV	46	52	58	59	1952	14	9	6	2	1927
V	55	66	80	82	1952	10	5	3	2	1915
VI	56	66	78	80	1952	14	9	7	5	1957
VII	100	110	122	120	1949	28	19	14	11	1931
VIII	104	120	143	152	1933	35	23	15	8	1951
IX	83	90	95	96	1940	22	14	9	5	1942
X	85	116	189	225	1940	21	14	9	1	1935
XI	89	101	119	122	1937, 1939	29	19	14	9	1947
XII	113	134	172	196	1946	36	28	22	13	1914
Year	709	770	882	882	1940	470	439	416	399	1941
34. Ust'-Kamchatsk										
I	135	160	194	196	1918	37	25	17	11	1932
II	144	178	220	221	1965	24	12	6	3	1937
III	90	107	129	130	1960	23	16	12	9	1945
IV	70	81	96	98	1934	19	13	9	6	1938
V	74	85	96	96	1952	11	6	3	3	1916
VI	54	64	79	79	1952	12	7	4	2	1957
VII	94	103	109	107	1933	26	19	14	10	1940
VIII	96	110	126	125	1915	30	22	16	10	1951
IX	89	100	109	108	1916	24	15	10	4	1914
X	98	120	170	178	1953	28	20	14	10	1942
XI	110	127	151	160	1937	38	24	15	3	1931
XII	134	145	151	152	1933	36	24	16	9	1941
Year	810	860	922	892	1950	490	430	370	353	1936

Month	Greatest amount, probability (%)			Observed maximum		Smallest amount, probability (%)			Observed minimum	
	10	5	2	mm	year or number of years	80	90	95	mm	year or number of years
47. Dolinovka										
I	72	84	93	89	1959	15	10	7	6	1955, 1964
II	48	60	75	72	1956	8	5	4	3	1959
III	36	48	66	61	1960	5	2	1	0	1961
IV	36	44	53	52	1961	8	5	4	3	1944
V	44	51	60	57	1962	10	4	1	0	1936
VI	59	61	62	61	1961	14	9	5	3	1936
VII	96	108	126	124	1946	33	23	16	10	1940
VIII	94	105	118	109	1940	35	22	12	7	1963
IX	64	68	70	69	1960	15	11	10	10	1958, 1959
X	52	62	78	86	1965	16	10	6	3	1954
XI	60	72	88	103	1939	18	12	7	6	1961
XII	65	70	76	88	1946	16	11	6	3	1961
Year	500	525	555	555	1965	340	305	280	258	1941
56. Sobolevo										
I	69	77	84	84	1952	14	8	4	1	1944, 1963
II	35	47	63	60	1950	6	3	2	2	1939, 1945
III	43	53	66	62	1955	6	3	1	1	1943, 1959
IV	76	94	124	150	1962	14	7	4	3	1944, 1947
V	96	112	134	126	1940	26	17	10	4	1955
VI	96	112	132	124	1942	22	13	9	8	1955
VII	172	204	246	237	1950	43	24	12	2	1956
VIII	212	274	372	350	1940	48	34	26	23	1963
IX	153	175	200	192	1960	41	30	24	21	1964
X	182	188	194	190	1957	94	82	72	28	1954
XI	130	150	186	181	1950	49	34	24	15	1947
XII	104	112	119	119	1950	30	22	16	11	1943
Year	1040	1150	1340	1278	1950	590	530	490	466	1947
68. Yelizovo										
I	72	88	110	105	1956	14	7	2	1	1963
II	64	78	96	90	1942	8	5	2	4	1963
III	60	83	128	120	1951	8	4	2	3	1961
IV	66	80	102	98	1962	12	6	3	2	1953
V	90	100	109	103	1962	23	16	12	4	1936
VI	110	129	146	138	1943	18	11	9	11	1939
VII	115	128	144	146	1962	42	26	16	13	1956
VIII	107	120	138	134	1942	42	30	22	14	1963
IX	162	177	188	188	1952	25	14	8	5	1959
X	108	129	162	153	1949	34	22	13	5	1942
XI	104	130	164	228	1942	22	12	6	1	1947
XII	127	184	272	252	1955	24	14	8	1	1941
Year	810	900	1020	951	1942	510	460	435	417	1936
77. Petropavlovsk, city I										
I	240	328	472	432	1918	40	28	24	25	1933, 1946
II	198	218	232	229	1938	26	14	8	7	1920
III	336	484	724	657	1918	44	20	9	4	1915
IV	164	182	190	186	1934	40	28	19	14	1922
V	148	153	160	158	1924	30	17	9	3	1916
VI	112	126	148	136	1943	25	15	9	5	1914
VII	132	158	191	182	1892	40	30	23	20	1945
VIII	158	168	180	178	1930	64	42	32	26	1920
IX	184	216	252	239	1942	48	32	21	18	1914
X	274	324	392	378	1936	60	40	30	27	1916
XI	348	520	784	733	1942	67	47	32	23	1916
XII	250	360	644	554	1933	48	28	16	6	1941
Year	1700	1920	2360	2170	1942	1079	960	890	875	1891

Month	Greatest amount, probability (%)			Observed maximum		Smallest amount, probability (%)			Observed minimum	
	10	5	2	MM	year or number of years	80	90	95	MM	year or number of years
86. Ust'-Bol'sheretsk										
I	85	102	120	115	1918	16	7	3	2	1963
II	40	50	63	92	1918	10	6	4	2	1963
III	47	58	73	72	1955	10	6	4	4	1947
IV	60	81	122	119	1962	10	6	4	2	1951
V	69	79	90	90	1964	14	8	5	3	1936
VI	84	100	120	121	1942	17	10	5	4	1936
VII	152	178	210	213	1961	33	17	9	10	1951, 1956
VIII	167	204	280	283	1940	47	30	16	6	1937
IX	157	170	174	174	1943	30	20	14	8	1946
X	152	168	189	187	1944	70	53	41	28	1954
XI	118	140	166	166	1914	38	30	24	6	1947
XII	80	88	98	98	1955	33	25	18	11	1943
Year	830	870	915	900	1961	560	500	443	389	1947
89. Ozernaya I										
I	176	244	340	327	1954	44	32	28	28	1946
II	99	128	179	174	1955	30	19	12	10	1953
III	88	97	107	101	1939	40	31	26	23	1945
IV	84	105	131	118	1954	13	10	9	11	1938
V	62	69	78	74	1938	19	11	5	3	1946
VI	65	67	69	68	1952	20	13	9	8	1939
VII	134	162	198	194	1950	37	24	15	11	1951
VIII	143	160	180	169	1939	50	38	31	29	1954
IX	151	164	174	170	1943	37	28	22	19	1955
X	143	148	150	149	1948	53	40	37	37	1942
XI	126	144	164	152	1942	49	38	31	31	1938
XII	210	272	356	312	1937	64	46	32	34	1941
Year	1048	1080	1100	1089	1954	659	603	575	568	1946

TABLE 4

MONTHLY AND ANNUAL AMOUNT OF PRECIPITATION (mm) WITH DIFFERENT PROBABILITY

Average amount of precipitation (mm)	Probability (%)										
	5	10	20	30	40	50	60	70	80	90	95
January											
10	26	20	16	12	7	6	5	4	2	0	0
20	62	42	32	24	18	15	12	9	7	3	0
30	97	64	46	36	28	23	20	15	12	7	3
40	132	86	60	47	38	32	26	21	17	10	5
50	167	107	75	59	48	40	34	27	21	14	7
60	198	128	90	70	58	49	40	33	26	18	10
70	230	150	103	82	68	57	47	39	31	22	12
80	264	171	118	93	78	66	54	45	36	25	14
90	295	192	132	105	88	74	62	51	41	29	16
100	325	213	146	117	99	83	69	57	45	33	19
120	382	253	173	138	118	100	83	68	55	40	23
140	443	293	201	161	137	115	96	80	64	47	27
160	500	332	230	184	157	132	110	91	73	54	31
180	560	370	257	207	177	149	124	103	82	61	35
February											
5	16	11	9	8	6	5	4	3	2	1	0
10	30	22	17	14	11	9	7	5	4	2	0
20	58	43	31	25	21	17	13	10	8	5	2
30	85	63	46	37	30	25	20	16	12	8	4
40	112	83	60	48	40	33	26	21	16	11	5
50	138	103	74	60	50	41	33	27	21	14	7
60	166	123	89	72	60	49	39	32	25	17	9
70	193	143	104	84	69	57	46	37	29	20	11
80	220	162	118	95	79	65	52	42	33	23	13
90	246	182	132	107	88	72	59	48	37	26	15
100	273	201	147	118	98	80	65	53	41	29	16
120	325	240	176	141	118	96	78	64	49	35	20
March											
5	13	12	12	11	8	6	3	3	3	2	0
10	28	25	19	16	12	9	7	5	4	3	0
20	53	42	33	27	22	17	14	11	8	4	1
30	88	62	46	38	30	25	20	16	12	7	2
40	120	83	60	48	40	33	27	21	15	9	3
50	150	103	73	60	49	41	34	26	19	11	3
60	182	123	86	71	58	50	41	31	22	13	4
70	214	144	100	83	68	58	48	36	26	16	4
80	244	164	113	94	77	65	55	41	30	18	5
90	275	185	127	105	86	73	61	46	33	20	6
100	305	205	140	116	95	81	68	51	37	22	7
120	370	246	167	138	114	97	82	61	44	26	9
140	424	290	194	160	132	113	95	72	51	30	10
160	482	323	220	181	150	128	108	81	58	34	11
April											
10	29	20	16	12	11	9	8	6	4	3	2
20	52	40	30	24	21	18	14	12	9	6	4
30	74	58	44	36	31	26	21	17	13	9	6
40	96	76	57	48	40	34	27	23	17	12	7
50	118	94	71	59	50	42	34	28	22	15	9
60	140	113	85	70	60	50	41	34	26	18	11
70	161	131	98	82	69	58	47	39	30	22	13
80	183	149	112	93	79	66	54	45	35	24	15
90	207	168	126	105	88	75	61	51	39	28	16

Average amount of precipitation (mm)	Probability (%)										
	5	10	20	30	40	50	60	70	80	90	95
100	230	185	140	117	98	83	68	56	43	31	18
120	273	223	168	140	117	99	81	67	52	37	22
140	318	259	195	164	135	115	94	78	60	43	25
					May						
10	27	22	18	16	13	10	8	7	5	3	1
20	49	40	33	28	23	19	15	13	9	6	3
30	71	58	47	39	34	27	23	18	13	8	4
40	93	77	61	51	44	36	30	24	17	11	5
50	115	95	75	63	55	44	37	30	20	13	17
60	137	113	90	75	65	53	44	36	24	16	8
70	158	131	105	86	75	62	52	42	28	18	9
80	180	150	120	98	86	71	59	48	32	20	11
90	201	168	133	111	96	81	67	54	36	23	12
100	223	185	147	122	106	88	73	59	39	25	13
120	266	222	176	145	127	106	88	71	47	29	15
					June						
20	49	37	31	26	20	17	14	11	8	5	3
30	70	56	47	40	32	26	21	17	13	7	5
40	91	75	63	53	42	35	28	23	17	11	6
50	112	94	78	66	53	44	36	28	22	14	8
60	133	113	94	78	63	53	43	34	27	17	9
70	155	132	110	91	74	63	50	40	31	20	10
80	175	152	127	105	85	72	58	46	36	23	13
90	197	171	143	118	95	82	65	51	41	26	14
100	218	189	158	130	105	90	72	57	45	28	16
					July						
40	82	70	60	49	42	38	32	28	23	16	10
50	105	90	74	63	52	46	38	32	26	18	11
60	127	109	90	76	62	54	44	37	29	20	12
70	150	127	107	90	73	63	50	41	32	22	13
80	172	146	124	103	84	71	57	46	34	24	14
90	194	165	140	117	95	80	63	50	37	25	15
100	217	184	157	130	105	88	69	55	40	27	16
120	261	222	190	158	127	105	81	63	46	31	18
140	304	259	221	183	147	121	93	71	52	34	20
160	348	295	253	211	167	137	105	79	58	40	22
					August						
30	65	54	50	44	37	33	28	22	16	11	7
40	85	68	62	55	47	41	35	28	21	15	10
50	105	84	75	65	56	50	43	35	26	18	13
60	127	99	88	77	66	58	50	41	32	23	16
70	147	115	101	87	75	66	57	48	37	27	19
80	169	130	113	98	85	75	65	54	42	31	21
90	190	145	126	109	94	83	72	60	47	35	24
100	212	160	139	120	104	91	80	67	52	38	27
120	255	192	165	142	123	107	95	80	63	47	33
140	299	217	190	162	141	125	110	92	73	54	39
					September						
20	46	37	28	23	21	17	16	14	12	8	2
30	69	56	44	36	31	26	23	20	16	11	4
40	92	75	60	49	41	35	30	26	20	14	7
50	116	95	76	62	52	43	37	31	25	17	10
60	140	113	92	75	63	52	44	37	29	21	12
70	164	132	108	89	73	60	51	42	33	24	15
80	187	151	124	102	84	69	58	47	37	27	18
90	212	170	140	115	94	77	65	52	42	31	21

Average amount of precipitation (mm)	Probability (%)										
	5	10	20	30	40	50	60	70	80	90	95
100	236	190	156	128	105	86	72	58	46	34	24
120	282	228	186	155	127	103	86	68	55	41	30
140	332	267	220	182	148	120	99	78	63	48	35
160	370	304	250	207	170	137	113	87	72	55	40
October											
20	54	40	32	25	20	15	10	7	3	2	0
30	69	54	44	36	31	25	20	16	11	7	4
40	85	69	57	48	42	35	29	24	19	13	8
50	103	83	70	60	52	46	39	33	26	19	12
60	120	98	82	71	64	56	48	42	34	24	15
70	137	113	95	83	75	66	58	50	42	30	19
80	154	128	107	95	86	76	68	59	49	35	23
90	172	142	120	108	97	87	78	68	57	41	26
100	189	157	133	120	108	97	88	77	65	47	30
120	223	186	159	144	130	118	107	95	80	58	38
140	256	216	184	168	153	138	127	112	96	69	45
160	290	245	210	192	175	160	146	130	111	80	53
180	323	275	237	217	199	182	168	149	128	92	61
200	355	304	263	240	221	203	188	167	143	103	69
November											
20	54	39	28	25	22	20	17	14	10	6	2
30	76	56	43	37	32	28	23	20	14	9	4
40	97	74	57	48	41	37	30	26	19	13	7
50	117	90	72	60	51	45	38	32	23	16	9
60	138	107	86	71	60	53	45	37	28	19	11
70	158	124	101	82	70	62	52	43	33	23	13
80	179	140	115	94	80	70	59	49	38	26	15
90	200	157	130	105	90	78	66	55	42	30	18
100	220	174	144	116	99	87	73	61	47	33	20
120	260	207	173	140	118	104	87	72	57	40	24
140	300	240	202	162	137	120	102	84	66	48	28
160	343	275	230	185	156	137	116	96	76	54	32
180	387	308	260	208	175	155	130	108	85	61	37
200	430	342	289	230	194	171	144	120	95	68	41
December											
20	48	38	32	26	23	20	18	14	11	6	0
30	77	56	46	38	32	28	25	20	15	9	2
40	110	76	59	49	42	36	32	26	19	13	4
50	140	95	72	60	52	44	39	31	24	16	6
60	172	115	85	71	62	52	45	37	28	19	8
70	204	135	99	83	71	61	52	42	32	22	10
80	235	155	112	94	81	69	60	48	36	25	12
90	262	175	126	106	91	77	66	54	40	28	14
100	299	194	139	117	101	85	73	60	44	31	16
120	358	234	166	140	120	101	87	71	53	37	20
140	418	271	191	161	139	118	100	82	61	43	24
160	478	310	217	184	158	134	114	93	69	48	28
180	539	350	243	206	177	150	127	104	77	54	31
200	600	388	268	228	195	167	140	115	85	60	36
Year											
250	348	296	282	275	266	261	255	245	223	182	123
300	424	370	344	330	318	310	298	286	262	220	156
350	502	443	408	387	371	357	342	326	302	256	191
400	580	516	470	442	424	402	384	366	340	294	224
450	657	584	532	499	474	450	427	406	378	330	259
500	732	652	594	556	526	498	470	446	418	366	294
550	807	720	654	611	580	544	511	486	458	403	329

Average amount of precipitation (mm)	Probability (%)										
	5	10	20	30	40	50	60	70	80	90	95
600	884	786	716	666	630	590	554	526	496	440	362
650	961	854	776	725	684	639	599	567	535	478	397
700	1038	922	836	780	736	686	640	608	574	514	432
750	1113	990	901	839	784	785	683	647	612	552	467
800	1184	1058	962	896	840	782	728	688	650	588	502
850	1256	1124	1025	952	893	832	771	729	688	625	538
900	1330	1194	1090	1010	946	880	816	770	728	662	572
950	1400	1261	1152	1066	999	930	863	811	766	698	607
1000	1470	1330	1214	1124	1050	978	908	852	804	736	642
1100	1612	1462	1338	1238	1154	1072	998	934	882	808	712
1200	1756	1600	1462	1350	1258	1170	1088	1014	960	880	782
1300	1896	1736	1586	1462	1360	1264	1174	1094	1036	954	852
1400	2036	1870	1710	1578	1460	1360	1264	1172	1114	1030	922
1500	2176	2006	1834	1690	1560	1456	1350	1250	1188	1002	992
1600	2314	2144	1958	1804	1664	1550	1438	1330	1264	1176	1060

TABLE 5

DIURNAL MAXIMUM PRECIPITATION (mm) WITH DIFFERENT PROBABILITY. ANNUAL

Station No.	Station	Average maximum	Probability (%)						Observed maximum	
			63	20	10	5	2	1	m.m	Date
1	Verkhne-Penzhino	21	18	24	29	35	47	59	46	10 VII 1957
30	Klyuchi	32	27	41	48	54	62	68	62	17 VII 1955
34	Ust'-Kamchatsk . .	29	25	39	46	53	61	68	58	15 II 1917
36	Kozyrevsk	26	22	34	38	42	43	45	40	12 VIII 1963
38	Esso	24	21	31	36	41	48	53	46	17 VII 1955
47	Dolinovka	26	22	32	37	40	45	48	43	12 XI 1939
50	Preobrazhenskoye (o. Mednyy)	44	35	53	70	86	100	108	96	11 X 1957
52	Mil'kovo	29	25	36	42	47	54	58	51	25 VII 1958
56	Sobolevo	47	38	65	79	89	98	102	92	10 VIII 1955
68	Yelizovo	44	34	58	73	83	96	101	89	3 IX 1952
69	Nachiki	48	38	62	76	90	108	122	105	7 XI 1942
77	Petropavlovsk, city I	102	82	133	160	186	220	247	207	9 XI 1934
89	Ozernaya I	44	34	56	74	87	110	132	103	20 XII 1937

TABLE 6

DIURNAL MAXIMUM PRECIPITATION (mm) WITH DIFFERENT PROBABILITY, BY MONTH

Month	Average maximum	Probability (%)						Observed maximum	
		63	20	10	5	2	1	mm	day, year
1. Verkhne-Penzhino									
I	6	4	9	13	17	22	27	21	10 1957
II	3	2	5	6	8	9	10	8	17 1957
									10 1959
									12 1959
III	3	2	5	6	8	9	10	11	20 1955
IV	5	2	7	10	12	16	20	17	1 1948
V	5	3	8	10	12	16	19	15	6 1963
VI	8	5	13	16	19	23	26	20	24 1945
VII	16	12	22	27	32	38	43	46	10 1957
VIII	14	10	21	26	30	35	39	36	4 1947
IX	9	6	15	21	27	38	47	43	4 1947
X	7	6	12	15	18	22	26	19	13 1945
XI	5	3	8	10	12	14	15	13	12 1963
XII	6	4	9	13	16	20	24	21	19 1964
9. Apuka II									
V	7	5	10	13	16	23	29	32	13 1964
VI	9	7	12	16	19	24	27	20	18 1950
VII	15	11	23	28	33	38	43	41	29 1963
VIII	15	12	23	28	31	34	36	34	21 1952
IX	13	8	24	31	37	44	49	37	11 1959
X	14	10	20	27	34	45	56	57	13 1952
19. Ust'-Voyampolka									
V	7	6	11	13	14	16	18	16	17 1949
VI	12	7	17	24	32	48	66	65	4 1955
VII	18	15	27	32	38	44	49	44	4 1963
VIII	20	16	27	33	37	43	47	44	6 1950
IX	16	11	24	32	39	48	54	46	7 1962
X	12	10	15	17	19	20	21	20	22 1939
21. Uka									
V	8	6	11	15	18	23	27	22	29 1956
VI	10	8	14	16	19	22	24	23	5 1938
VII	16	10	23	31	38	47	53	46	21 1946
VIII	18	13	24	30	36	44	50	41	5 1945
									12 1963
IX	11	9	16	18	21	24	26	23	21 1958
X	15	11	21	25	29	35	38	33	13 1938
26. Ust'-Khazryuzovo									
V	10	5	10	14	16	21	25	19	4 1933
									21 1959
VI	11	8	16	18	21	24	26	21	9 1952
									28 1960
									20 1962
VII	20	14	29	39	47	58	66	56	20 1946
VIII	25	17	37	47	55	65	70	61	5 1950
IX	16	13	24	28	32	36	38	35	1 1950
X	14	10	18	23	28	35	41	37	26 1963
30. Klyuchi									
I	11	8	15	20	24	30	36	32	23 1951
II	10	6	15	22	29	40	49	43	4 1934

Month	Average maximum	Probability (%)						Observed maximum	
		63	20	10	5	2	1	мм	day, year
III	10	5	13	19	27	42	59	48	5 1960
IV	7	5	9	12	15	19	23	24	29 1965
V	10	7	15	18	21	24	27	23	15 1950
VI	10	7	15	19	22	25	28	24	26 1958
VII	18	12	26	33	42	54	66	62	17 1955
VIII	19	14	27	36	43	55	65	58	21 1957
IX	15	10	20	26	32	40	47	42	14 1953
X	15	11	21	28	36	47	57	49	23 1940
XI	13	9	20	24	28	33	36	34	3 1953
XII	13	9	19	23	26	29	32	30	11 1915 25 1954
				34. Ust'-Kamchatsk					
I	14	8	22	30	38	50	58	54	10 1956
II	14	6	22	33	42	53	59	58	15 1917
III	10	5	17	23	27	34	37	28	5 1960
IV	9	6	14	20	25	35	43	36	5 1954
V	10	7	15	20	24	29	33	27	13 1965
VI	9	7	13	16	18	21	22	20	5 1938 15 1952
VII	15	10	22	28	35	43	48	43	12 1949
VIII	19	13	25	33	41	54	65	43	21 1957
IX	13	10	18	22	26	30	33	30	26 1952
X	16	12	22	28	32	36	39	37	15 1958
XI	15	11	21	26	31	37	43	38	29 1933
XII	12	9	18	23	28	34	40	35	22 1956
				36. Kozyrevsk					
I	10	5	13	22	28	36	40	34	14 1960
II	10	6	14	20	25	33	39	33	8 1944
III	6	3	9	13	17	25	33	24	24 1957
IV	7	5	11	14	16	17	18	16	28 1942 29 1959
V	8	7	13	15	16	18	19	16	9 1954
VI	9	6	12	17	22	31	40	31	26 1958
VII	14	10	20	27	32	38	42	36	24 1948
VIII	18	13	30	36	40	42	43	40	12 1963
IX	13	9	18	24	29	37	44	37	16 1960
X	11	9	16	20	24	30	35	30	11 1953
XI	10	7	15	20	24	29	33	26	17 1962
XII	10	6	16	21	26	32	36	32	20 1952
				38. Esso					
I	8	4	12	16	20	27	34	27	14 1956
II	5	3	8	10	16	24	30	13	7 1955
III	5	2	6	11	16	26	39	28	6 1960
IV	5	3	8	10	14	19	24	24	25 1962
V	7	5	10	13	17	22	27	20	21 1948
VI	10	8	15	18	22	25	28	21	25 1943
VII	18	15	24	29	33	40	46	46	17 1955
VIII	18	14	25	31	35	41	44	41	5 1956
IX	10	7	13	18	24	33	42	29	14 1953
X	9	7	13	16	19	23	26	18	31 1965
XI	10	7	14	18	22	26	30	21	3 1963
XII	9	6	12	15	17	21	25	20	2 1955
				47. Dolinovka					
I	10	6	14	19	24	31	37	27	3 1940
II	7	5	10	12	15	19	22	16	7 1944

Month	Average maximum	Probability (%)						Observed maximum	
		63	20	10	5	2	1	мм	day, year
III	5	4	8	10	12	16	18	15	4 1954
IV	7	5	9	12	15	18	21	18	11 1952
V	8	6	12	15	19	24	28	20	31 1950
									23 1965
VI	10	7	14	18	22	27	32	23	2 1948
									9 1952
VII	18	14	27	32	36	42	45	41	16 1936
VIII	16	13	21	25	28	31	33	29	5 1956
IX	12	8	16	22	27	32	35	31	16 1960
X	12	8	17	23	28	37	44	36	16 1965
XI	12	9	16	24	33	43	46	43	12 1939
XII	11	8	16	20	25	32	37	31	8 1947
		50. Preobrazhenskoye (o. Mednyy)							
I	16	11	24	30	35	40	44	39	19 1957
II	12	8	16	22	28	39	49	40	1 1956
III	14	10	19	24	29	38	45	36	12 1939
IV	13	10	20	25	30	35	39	32	21 1956
V	18	10	29	41	51	61	67	54	21 1956
VI	13	9	21	26	29	32	34	29	21 1964
VII	21	14	30	39	45	50	54	46	4 1949
VIII	29	22	36	44	66	83	94	82	16 1943
IX	23	18	31	38	45	55	63	50	20 1939
X	30	23	38	48	60	77	92	96	11 1957
XI	26	20	34	41	47	54	60	60	22 1964
XII	18	12	26	33	41	52	61	50	4 1954
		52. Mil'kovo							
I	13	9	19	24	30	39	46	30	25 1954
II	10	7	14	20	25	31	36	28	6 1955
III	9	6	11	15	19	26	33	37	6 1937
IV	7	5	10	13	15	18	20	17	5 1938
V	10	8	15	18	20	22	24	22	31 1962
VI	10	8	14	17	20	24	28	23	28 1948
VII	19	13	27	35	43	51	55	51	25 1958
VIII	17	13	23	28	34	41	47	39	5 1956
IX	13	9	18	28	35	43	46	42	9 1949
X	13	11	19	23	26	30	32	27	18 1964
XI	14	10	20	25	31	38	45	36	12 1939
XII	14	9	19	26	33	42	50	35	12 1946
		56. Sobolevo							
I	7	5	9	12	14	16	19	15	28 1958
II	4	2	7	10	13	17	21	16	5 1942
III	6	4	8	12	17	24	31	21	17 1951
IV	12	7	16	23	30	43	54	51	25 1962
V	16	12	23	28	32	37	40	36	20 1948
VI	15	10	22	27	31	36	39	35	10 1948
VII	30	20	45	59	71	88	100	91	16 1950
VIII	33	22	52	68	80	92	98	92	10 1955
IX	22	17	31	38	43	50	53	51	25 1950
X	25	20	24	40	46	53	58	51	16 1965
XI	14	11	20	26	31	39	45	37	15 1951
XII	11	8	15	18	22	27	30	31	3 1950
		68. Yelizovo							
I	14	8	21	29	36	44	48	41	31 1961
II	10	5	15	22	27	33	36	31	6 1942
III	9	5	13	18	23	34	45	29	16 1951

Month	Average maximum	Probability (%)						Observed maximum	
		63	20	10	5	2	1	мм	day, year
IV	12	8	18	24	30	39	46	37	25 1962
V	14	10	20	24	29	36	42	35	20 1948
VI	16	11	22	31	42	56	70	50	28 1961
VII	20	15	28	34	38	43	46	42	20 1947
VIII	23	15	31	41	53	73	92	84	13 1942
IX	25	13	37	61	79	89	94	89	3 1952
X	20	16	27	35	44	62	80	69	26 1944
XI	16	11	24	32	40	51	59	49	29 1942
XII	19	9	27	38	50	73	95	70	6 1956
				69. Nachiki					
I	14	9	21	27	32	39	44	43	25 1954
II	12	8	18	23	27	33	36	34	12 1944
III	14	10	22	25	28	30	32	30	11 1961
IV	12	8	17	22	27	33	36	32	3 1952
V	13	9	20	24	29	35	39	34	20 1948
VI	12	8	20	27	31	34	35	33	15 1942
VII	21	16	26	35	42	54	66	59	20 1947
VIII	22	16	31	41	50	63	72	58	9 1964
IX	26	17	41	52	63	76	85	74	20 1954
X	29	20	39	50	60	73	84	77	16 1965
XI	23	14	25	42	68	96	115	105	7 1942
XII	20	13	29	40	49	62	73	62	14 1944
				77. Petropavlovsk, city I					
I	26	18	36	50	68	102	140	109	4 1918
II	25	13	45	56	65	75	81	74	5 1945
III	39	15	73	105	125	142	150	135	9 1916
IV	29	18	45	60	70	79	84	78	12 1945
V	26	17	38	50	62	76	85	70	6 1924
VI	20	14	28	37	45	55	62	51	1 1916
VII	26	19	34	44	55	73	90	76	30 1892
VIII	34	27	47	55	63	72	77	72	2 1916
IX	41	25	60	88	114	150	176	148	29 1944
X	57	36	80	115	148	190	226	189	2 1920
XI	59	34	78	114	150	198	234	207	9 1934
XII	36	20	66	90	106	119	125	103	15 1933
				83, 84. Petropavlovsk, lighthouse I, II					
IV	16	10	25	35	46	58	65	62	3 1916
V	16	10	22	30	40	57	77	71	13 1904
VI	17	12	27	36	43	50	53	49	21 1962
VII	25	17	36	46	54	68	78	76	24 1965
VIII	26	20	37	45	50	55	57	57	1 1927
IX	28	19	40	53	66	82	94	86	20 1954
X	26	19	37	44	50	56	60	59	26 1944
XI	20	13	26	36	48	70	97	83	29 1942
				86. Ust'-Bol'sheretsk					
IV	9	4	12	18	24	37	50	38	20 1954
V	11	7	15	21	28	39	50	39	15 1949
VI	14	8	20	29	37	50	64	48	26 1915
VII	25	16	41	50	56	64	70	67	3 1961
VIII	29	22	42	51	58	66	71	66	28 1940
IX	19	13	27	37	47	59	67	60	1 1943
X	21	15	32	38	44	50	55	48	29 1964
XI	14	10	18	24	30	41	50	48	10 1914

Month	Average maximum	Probability (%)						Observed maximum	
		63	20	10	5	2	1	M.M	day, year
				89. Ozernaya I					
I	11	8	17	23	29	38	45	38	8 1956
II	12	4	16	29	42	59	70	57	11 1952
III	12	7	16	23	32	53	80	48	14 1955
IV	13	5	20	31	44	64	84	54	20 1954
V	17	8	15	20	26	35	45	28	10 1940
VI	15	10	20	27	34	43	51	38	30 1950
VII	23	15	32	42	54	74	90	66	1 1950
VIII	24	18	33	42	50	62	72	50	29 1949
IX	20	15	31	42	53	70	83	61	26 1935
X	21	16	27	34	40	48	54	45	20 1951
XI	16	11	23	30	36	46	55	35	28 1935
XII	20	6	24	48	88	107	114	103	20 1937
				92. Lopatka, mys					
IV	18	10	28	39	49	62	74	60	25 1962
V	16	12	21	28	35	47	56	46	11 1954
VI	16	12	24	29	33	37	41	37	3 1938
VII	25	18	35	46	57	74	88	72	12 1959
VIII	22	18	29	35	40	50	57	52	14 1943
IX	28	21	39	48	56	65	72	64	6 1953
X	21	17	28	33	38	43	47	39	19 1948 30 1961
XI	22	15	33	41	48	55	59	50	2 1936

TABLE 7
MAXIMUM INTENSITY OF PRECIPITATION (mm/min) FOR DIFFERENT TIME INTERVALS. ANNUAL

Station No.	Station	Time periods						
		minutes				hours		
		5	10	20	30	1	12	24
4	Kamenskoye	0.26 25 VII 1955	0.26 25 VII 1955	0.18 25 VII 1955	0.14 (25 VII 1955)	0.09 8 VIII 1957	0.03 9 VIII 1956	0.02 11–12 VIII 1959
9	Apuka II	0.22 31 VIII 1958	0.16 23 VII 1960	0.14 23 VII 1960	0.14 —	0.11 17 VIII 1961	0.03 23 VII 1960	0.02 29 IX 1960
12	Korf	0.18 18 VII 1958	0.18 18 VII 1958	0.18 22 IX 1960	0.17 (22 IX 1960)	0.11 22 IX 1960	0.01 20–21 VIII 1952	0.03 11–IX 1959
18	Karaginskiy ostrov II	0.18 26 VII 1962	0.14 26 VII 1962	0.12 26 VII 1962	0.12 (26 VII 1962)	0.11 26 VII 1962	0.04 28–29 IX 1960	0.02 22–24 VII 1960
21	Uka	0.28 15 VIII 1959	0.25 15 VIII 1959	0.22 15 VIII 1959	0.20 (15 VIII 1959)	0.13 15 VIII 1953	0.03 15 VIII 1953	0.02 15 VIII 1953
23	Tigil'	0.50 18 VIII 1962	0.36 18 VIII 1962	0.32 22 VII 1959	0.27 (22 VII 1959)	0.15 22 VII 1959	0.03 8 VIII 1956	0.02 11 VII 1957
30	Klyuchi	0.40 16 VIII 1961	0.38 16 VIII 1961	0.27 16 VIII 1961	0.21 (16 VIII 1961)	0.12 16 VIII 1961	0.05 20–21 VIII 1957	0.04 21 VIII 1957
34	Ust'-Kamchatsk	0.45 3 VII 1946	0.45 3 VII 1946	0.38 3 VII 1946	0.25 (3 VII 1946)	0.14 8 VIII 1956	0.03 8 VIII 1956	0.02 8 VIII 1956
36	Kozyrevsk	0.42 8 VII 1948	0.42 8 VII 1948	0.40 8 VII 1948	0.38 (8 VII 1948)	0.29 8 VII 1948	0.05 11—13 VII 1949	0.03 11—13 VII 1949
38	Esso	0.50 1 VII 1958	0.39 1 VII 1958	0.36 1 VII 1958	0.33 —	0.26 22 VII 1962	0.04 2–3 VIII 1962	0.02 2–3 VIII 1962

Station No.	Station	Time periods						
		minutes				hours		
		5	10	20	30	1	12	24
45, 46	Nikol'skoye (o. Beringa) I, II	0.44 8 VIII 1956	0.34 29 IX 1959	0.24 29 IX 1959	0.21 —	0.14 8 VIII 1956	0.05 10—11 IX 1959	0.03 10—11 IX 1959
51	Mil'kovo, experimental agricultural station	0.24 7 VII 1942	0.24 7 VII 1942	0.20 1 IX 1940	0.18 (1 IX 1940)	0.12 1 IX 1940	0.03 7—8 VIII 1949	0.02 7—8 VIII 1949
56	Sobolevo	0.42 9 VII 1961	0.31 31 VII 1957	0.28 11 VII 1957	0.23 (11 VII 1957)	0.17 11 VII 1957	0.06 24—25 IX 1960	0.04 24—25 IX 1960
57	Pushchino	0.28 31 VII 1957	0.28 11 VIII 1957	0.20 11 VIII 1957	0.20 —	0.15 11 VIII 1957	0.04 31 VII—1 VIII 1957	0.03 25 VII 1958
59	Semlyachiki	0.72 24 IX 1943	0.51 29 IX 1944	0.44 29 IX 1944	0.34 —	0.26 24 IX 1943	0.11 25—26 X 1944	0.08 25—26 X 1944
68	Yelizovo	1.00 7 VII 1962	1.00 7 VII 1962	0.68 7 VII 1962	0.48 (7 VII 1962)	0.26 7 VII 1962	0.10 2—3 IX 1952	0.07 2—3 IX 1952
69	Nachiki	1.02 19 VIII 1959	1.01 19 VIII 1959	0.82 19 VIII 1959	0.77 (19 VIII 1959)	0.48 19 VIII 1959	0.09 28—29 VIII 1945	0.05 20 IX 1954
77, 78	Petropavlovsk, city I, II	0.84 24 IX 1943	0.71 1 VIII 1943	0.43 2 VIII 1943	0.37 —	0.30 17 IX 1942	0.18 28—29 IX 1953	0.15 28—29 IX 1953
81, 85	Bol'sheretskiy sovkhoz, Bol'sheretsk	0.69 24 VII 1961	0.69 24 VII 1961	0.46 24 VII 1961	0.45 (24 VII 1961)	0.38 24 VII 1961	0.09 2 VII 1961	0.07 2 VII 1961
89, 90	Ozernaya I, II	1.24 15 VIII 1956	0.76 25 VII 1961	0.64 25 VII 1961	0.59 (25 VII 1961)	0.36 25 VII 1961	0.08 13—14 VII 1962	0.04 13—14 VII 1962

TABLE 8
NUMBER OF DAYS WITH DIFFERENT AMOUNT OF PRECIPITATION

Month	Precipitation (mm)				
	≥ 0.1	≥ 0.5	≥ 1.0	≥ 5.0	≥ 10.0
	1. Verkhne-Penzhino				
I	14.0	10.2	7.7	1.4	0.3
II	10.0	6.2	4.0	0.2	0.0
III	9.4	5.4	3.9	0.6	0.05
IV	10.4	5.9	4.0	0.6	0.05
V	8.6	4.8	2.8	0.6	0.2
VI	9.4	6.7	4.7	1.4	0.4
VII	12.1	9.5	7.9	3.2	1.4
VIII	11.4	8.7	6.4	2.7	1.0
IX	9.6	6.7	5.3	1.6	0.3
X	10.5	7.1	5.3	1.3	0.1
XI	13.2	8.1	6.0	1.0	0.2
XII	12.4	8.2	6.2	1.2	0.4
Year	131	88	64	16	4
	4. Kamenskoye				
I	16.6	11.1	8.2	1.8	0.6
II	12.3	8.2	5.5	0.7	0.3
III	13.5	8.1	5.6	1.1	0.3
IV	13.6	9.2	6.3	0.8	0.1
V	10.6	7.2	4.7	0.9	0.0
VI	8.3	6.1	5.2	1.5	0.5
VII	11.2	9.1	8.3	3.0	1.2
VIII	12.1	10.0	8.8	4.5	2.0
IX	10.4	7.4	5.9	2.0	0.4
X	13.4	9.1	6.5	1.6	0.4
XI	14.4	9.1	6.5	0.9	0.1
XII	14.7	10.7	8.3	1.4	0.3
Year	151	105	80	20	6
	7. Chemurnaut				
I	21.6	15.5	12.4	4.7	1.2
II	16.8	12.6	9.6	2.9	0.7
III	18.6	13.8	10.8	3.6	1.5
IV	17.9	12.9	10.1	2.0	0.6
V	13.2	10.1	8.0	2.6	0.9
VI	8.1	5.7	4.3	1.4	0.2
VII	10.7	8.3	7.4	3.3	1.6
VIII	12.5	10.6	8.9	4.1	2.1
IX	11.3	8.9	7.5	3.4	1.7
X	19.9	15.7	12.9	4.9	1.6
XI	20.6	15.4	12.1	3.8	1.7
XII	19.3	13.9	10.9	2.9	1.4
Year	190	143	115	40	15
	9. Apuka* II				
I	*15.2*	*11.9*	*10.1*	*4.4*	*1.7*
II	*12.7*	*9.3*	*7.8*	*2.9*	*1.1*
III	*13.6*	*9.6*	*7.3*	*2.7*	*1.2*
IV	12.4	8.8	6.8	2.1	1.0
V	11.1	7.9	6.0	1.6	0.4
VI	9.9	6.2	5.2	1.6	0.5
VII	13.3	9.9	8.5	4.2	1.7
VIII	13.0	10.0	9.0	4.4	2.0
IX	10.9	8.5	7.1	2.6	1.1
X	10.6	7.8	6.3	2.5	1.0
XI	*10.9*	*8.3*	*6.9*	*2.5*	*1.1*
XII	*11.3*	*8.7*	*7.5*	*3.7*	*1.5*
Year	*145*	*108*	*88*	*35*	*14*

Month	Precipitation (mm)						
	≥ 0.1	≥ 0.5	≥ 1.0	≥ 5.0	≥ 10.0	≥ 20.0	≥ 30.0
				12. Korf*			
I	*12.9*	*10.6*	*9.0*	*3.2*	*1.4*	*0.1*	*0.0*
II	*8.7*	*6.1*	*3.9*	*0.5*	*0.1*	*0.0*	*0.0*
III	*11.2*	*8.2*	*6.3*	*1.4*	*0.6*	*0.2*	*0.0*
IV	11.1	7.4	5.5	1.7	0.6	0.2	0.0
V	10.5	6.9	5.7	1.6	0.3	0.0	0.0
VI	9.2	6.4	4.7	1.5	0.3	0.0	0.0
VII	12.7	9.8	8.0	3.2	1.5	0.3	0.1
VIII	13.5	10.5	8.6	3.4	1.3	0.3	0.0
IX	10.3	8.1	7.1	3.0	1.1	0.3	0.1
X	10.9	8.2	6.9	2.8	1.4	0.4	0.1
XI	*10.2*	*8.0*	*6.2*	*1.9*	*0.7*	*0.0*	*0.0*
XII	*11.7*	*8.6*	*6.3*	*1.7*	*1.0*	*0.1*	*0.0*
Year	*133*	*99*	*78*	*26*	*10*	*2*	*0.3*
				17, 18. Karaginskiy ostrov I, II			
I	17.1	14.1	11.6	3.6	0.9	0.1	0.04
II	16.5	13.5	11.1	3.2	1.1	0.2	0.2
III	14.1	11.6	9.6	2.2	0.4	0.0	0.0
IV	12.9	9.1	7.0	1.4	0.3	0.1	0.0
V	10.9	7.5	5.8	1.3	0.4	0.1	0.03
VI	6.8	6.3	4.9	1.2	0.3	0.1	0.0
VII	11.1	9.2	7.7	2.9	1.1	0.4	0.2
VIII	12.1	9.8	8.2	2.8	1.2	0.2	0.1
IX	11.6	9.6	8.0	2.9	1.1	0.3	0.03
X	12.5	10.0	8.1	3.1	1.0	0.2	0.1
XI	16.7	13.5	11.2	3.4	1.2	0.2	0.0
XII	18.8	15.4	12.8	4.0	1.3	0.2	0.05
Year	161	130	106	32	10	2	0.8
				19. Ust'-Voyampolka*			
I	*12.8*	*9.6*	*7.2*	*0.8*	*0.2*	*0.0*	*0.0*
II	*9.1*	*4.8*	*3.1*	*0.1*	*0.0*	*0.0*	*0.0*
III	*12.4*	*7.2*	*4.9*	*0.4*	*0.0*	*0.0*	*0.0*
IV	12.2	7.2	5.4	0.8	0.1	0.0	0.0
V	8.6	5.8	4.5	1.0	0.3	0.0	0.0
VI	9.2	7.0	5.7	2.0	0.6	0.2	0.03
VII	12.3	9.8	8.2	3.7	1.9	0.5	0.1
VIII	14.0	11.4	9.6	4.8	2.2	0.7	0.1
IX	12.4	9.8	8.2	3.4	1.5	0.4	0.1
X	19.4	16.2	13.6	4.6	1.1	0.0	0.0
XI	*19.4*	*16.1*	*12.6*	*2.4*	*0.3*	*0.0*	*0.0*
XII	*14.9*	*11.0*	*7.4*	*1.4*	*0.2*	*0.0*	*0.0*
Year	*157*	*116*	*91*	*25*	*8*	*2*	*0.3*
				21. Uka			
I	19.5	13.8	9.5	1.9	0.3	0.0	0.0
II	16.9	10.8	7.4	1.8	0.7	0.1	0.0
III	16.5	10.4	6.7	1.1	0.3	0.03	0.0
IV	13.4	8.4	5.5	0.8	0.1	0.0	0.0
V	11.7	8.3	6.3	1.6	0.3	0.03	0.0
VI	11.0	7.8	6.4	1.8	0.6	0.04	0.0
VII	12.9	9.8	8.1	3.4	1.5	0.4	0.1
VIII	13.9	10.7	8.8	4.0	1.4	0.4	0.1
IX	11.6	9.2	7.7	3.2	1.1	0.1	0.0
X	13.0	10.9	9.1	3.1	1.4	0.3	0.03
XI	15.4	11.9	9.5	2.1	0.8	0.03	0.0
XII	19.1	13.4	9.7	1.7	0.5	0.0	0.0
Year	175	125	95	26	9	1	0.2

Month	Precipitation (mm)						
	⩾ 0.1	⩾ 0.5	⩾ 1.0	⩾ 5.0	⩾ 10.0	⩾ 20.0	⩾ 30.0
23. Tigil'							
I	13.4	8.1	5.7	1.0	0.2		
II	8.6	5.2	3.2	0.6	0.0		
III	9.4	6.2	3.8	0.6	0.2		
IV	10.6	7.5	5.2	0.8	0.2		
V	10.0	7.6	6.0	1.4	0.1		
VI	9.6	7.5	6.5	2.4	0.7		
VII	11.9	10.2	8.4	3.7	1.8		
VIII	13.4	10.2	8.6	4.3	2.6		
IX	13.7	9.8	8.3	2.9	1.4		
X	19.9	15.9	13.1	3.4	0.7		
XI	17.4	11.4	9.0	1.4	0.1		
XII	14.2	9.8	7.4	1.4	0.1		
Year	152	109	85	24	8		
26. Ust'-Khayryuzovo*							
I	*14.4*	*10.5*	*9.1*	*1.9*	*0.1*	*0.0*	*0.0*
II	*10.8*	*6.2*	*3.8*	*0.2*	*0.0*	*0.0*	*0.0*
III	*11.9*	*7.8*	*5.1*	*0.5*	*0.0*	*0.0*	*0.0*
IV	13.6	8.3	6.0	0.7	0.1	0.0	0.0
V	10.2	6.9	5.0	1.2	0.3	0.0	0.0
VI	10.1	7.4	5.7	2.0	0.7	0.1	0.0
VII	13.9	9.9	8.5	3.9	1.8	0.6	0.2
VIII	14.8	11.4	9.4	5.0	2.8	0.8	0.3
IX	14.2	11.3	9.6	3.9	1.6	0.3	0.1
X	20.8	17.9	14.9	5.2	1.5	0.2	0.03
XI	*20.6*	*17.8*	*14.5*	*3.8*	*0.3*	*0.0*	*0.0*
XII	*17.9*	*14.7*	*11.4*	*2.3*	*0.2*	*0.03*	*0.0*
Year	*173*	*131*	*104*	*31*	*9*	*2*	*0.6*
30. Klyuchi							
I	16.0	12.3	9.8	3.3	0.9	0.1	0.02
II	14.5	10.8	7.9	1.9	0.6	0.1	0.04
III	12.2	8.7	7.0	1.4	0.5	0.1	0.1
IV	9.9	7.5	6.2	1.1	0.2	0.02	0.0
V	9.5	7.4	5.6	1.6	0.7	0.2	0.0
VI	9.7	7.4	5.9	1.8	0.8	0.1	0.0
VII	12.6	10.5	8.9	3.7	1.4	0.4	0.1
VIII	12.6	10.3	8.9	4.1	1.8	0.5	0.2
IX	11.0	8.8	7.5	2.8	1.2	0.2	0.1
X	9.5	8.2	7.1	3.1	1.4	0.4	0.1
XI	11.9	9.3	7.3	2.7	1.0	0.2	0.02
XII	16.0	12.3	10.0	3.0	1.0	0.2	0.02
Year	145	114	92	30	12	2	0.7
34. Ust'-Kamchatsk							
I	18.5	14.8	11.6	3.5	1.3	0.3	0.06
II	16.8	12.8	9.9	2.9	1.2	0.4	0.2
III	15.0	11.1	8.6	2.2	0.8	0.2	0.0
IV	12.7	9.6	6.9	1.6	0.4	0.1	0.02
V	11.6	8.7	6.9	2.0	0.7	0.1	0.0
VI	10.3	7.2	5.9	1.8	0.5	0.02	0.0
VII	13.3	10.2	8.5	3.4	1.2	0.3	0.1
VIII	13.3	10.7	9.0	3.3	1.3	0.4	0.1
IX	12.5	10.1	8.3	3.4	1.4	0.1	0.02
X	11.3	9.6	8.2	3.7	1.9	0.4	0.1
XI	13.2	11.1	9.2	3.8	1.5	0.3	0.1
XII	17.4	13.7	11.0	3.9	1.8	0.2	0.02
Year	166	130	104	36	14	3	0.8

Month	Precipitation (mm)						
	≥ 0.1	≥ 0.5	≥ 1.0	≥ 5.0	≥ 10.0	≥ 20.0	≥ 30.0
				38. Esso			
I	14.0	8.5	6.0	1.6	0.4	0.04	0.0
II	12.2	6.7	4.8	0.8	0.2	0.0	0.0
III	10.2	5.4	3.6	0.5	0.2	0.04	0.0
IV	10.8	5.0	3.1	0.5	0.1	0.04	0.0
V	10.0	6.2	4.4	0.8	0.2	0.04	0.0
VI	11.6	8.9	6.8	2.1	0.5	0.04	0.0
VII	14.0	11.6	9.9	4.4	1.9	0.4	0.04
VIII	13.2	10.3	9.4	4.0	1.6	0.3	0.1
IX	12.1	9.0	7.3	1.6	0.5	0.04	0.0
X	17.6	11.4	7.8	1.8	0.4	0.0	0.0
XI	16.8	10.6	7.0	1.3	0.4	0.1	0.0
XII	16.2	10.3	7.6	1.8	0.4	0.04	0.0
Year	159	104	78	21	7	1	0.1
				40. Icha			
I	12.6	9.4	6.6	0.7	0.1	0.0	0.0
II	9.7	6.4	4.1	0.4	0.03	0.03	0.0
III	11.9	7.1	4.5	0.6	0.1	0.0	0.0
IV	14.0	9.7	7.1	1.4	0.6	0.1	0.0
V	10.7	7.4	6.2	2.1	0.7	0.2	0.0
VI	10.9	7.9	6.3	2.8	0.9	0.1	0.03
VII	14.9	10.9	9.0	4.3	2.3	0.7	0.2
VIII	14.5	11.4	9.5	4.7	2.7	1.0	0.3
IX	14.2	11.8	10.4	4.2	1.9	0.6	0.3
X	21.0	18.8	16.6	7.0	2.6	0.5	0.2
XI	19.0	15.8	12.9	3.1	1.0	0.2	0.1
XII	16.2	12.2	10.2	1.6	0.3	0.1	0.03
Year	170	129	103	33	13	4	1
				45, 46. Nikol'skoye (o. Beringa)* I, II			
I	—	*18.3*	*14.4*	*3.5*	*0.7*	*0.2*	*0.1*
II	—	*14.7*	*10.7*	*2.1*	*0.4*	*0.1*	*0.1*
III	—	*15.3*	*10.3*	*2.0*	*0.6*	*0.3*	*0.1*
IV	17.0	10.5	7.1	1.6	0.4	0.03	0.03
V	14.5	9.6	7.3	2.3	0.8	0.1	0.0
VI	12.8	7.5	5.8	1.7	0.8	0.1	0.0
VII	15.7	10.1	7.6	3.3	1.2	0.2	0.0
VIII	16.2	10.9	8.6	3.7	1.9	0.8	0.3
IX	15.6	12.1	9.5	3.4	1.2	0.4	0.1
X	18.6	15.2	12.6	4.8	2.0	0.5	0.03
XI	—	*18.5*	*14.2*	*4.5*	*1.7*	*0.3*	*0.1*
XII	—	*17.7*	*13.1*	*3.7*	*1.1*	*0.2*	*0.0*
Year	—	*160*	*121*	*37*	*13*	*3*	*0.9*
				47. Dolinovka			
I	13.7	9.8	7.1	1.8	0.7	0.1	0.0
II	10.3	7.0	5.5	1.2	0.3	0.0	0.0
III	8.3	5.8	4.6	0.8	0.1	0.0	0.0
IV	8.2	5.8	4.6	0.9	0.2	0.0	0.0
V	8.5	6.4	5.2	1.2	0.4	0.03	0.0
VI	11.1	8.6	6.7	2.0	0.6	0.1	0.0
VII	13.2	10.9	9.3	3.4	1.7	0.5	0.1
VIII	12.4	10.3	8.9	4.1	1.8	0.4	0.0
IX	10.0	8.7	7.9	2.2	0.8	0.1	0.03
X	9.4	7.4	6.0	1.9	0.7	0.2	0.03
XI	11.1	8.6	6.8	1.9	0.6	0.1	0.1
XII	12.8	9.6	7.7	2.3	0.8	0.1	0.03
Year	129	99	79	24	9	2	0.3

Month	Precipitation (mm)						
	≥ 0.1	≥ 0.5	≥ 1.0	≥ 5.0	≥ 10.0	≥ 20.0	≥ 30.0
50. Preobrazhenskoye (o. Mednyy)							
I	24.3	21.6	18.1	5.9	2.4	0.6	0.04
II	22.7	19.2	15.6	3.6	0.9	0.1	0.04
III	23.5	19.1	16.1	3.9	1.4	0.3	0.04
IV	19.3	15.8	12.8	3.7	1.2	0.2	0.04
V	16.2	12.9	10.3	3.9	1.4	0.5	0.2
VI	14.9	10.7	8.8	3.0	1.3	0.3	0.0
VII	15.6	12.0	10.0	4.4	2.1	0.5	0.2
VIII	17.1	14.0	11.2	5.5	3.0	1.3	0.5
IX	16.6	14.6	12.7	6.1	3.1	1.1	0.3
X	21.0	19.0	16.9	8.3	4.5	1.7	0.5
XI	24.3	21.7	18.4	7.0	3.2	1.1	0.4
XII	24.8	21.5	17.6	5.6	2.1	0.4	0.2
Year	240	202	168	61	27	8	2
52. Mil'kovo							
I	16.6	12.8	10.6	4.1	1.6	0.1	0.04
II	13.8	10.7	8.8	2.2	0.6	0.1	0.0
III	11.5	8.7	6.7	1.7	0.4	0.0	0.0
IV	9.9	7.1	5.1	1.2	0.2	0.0	0.0
V	9.6	6.7	5.2	1.2	0.6	0.04	0.0
VI	11.5	9.2	8.2	2.5	0.8	0.0	0.0
VII	13.0	11.2	9.5	5.0	2.3	0.4	0.1
VIII	11.3	9.8	8.2	3.8	1.6	0.3	0.1
IX	10.3	8.7	7.5	2.9	0.8	0.2	0.1
X	10.0	8.2	6.9	2.3	1.0	0.1	0.0
XI	12.2	9.7	8.1	3.0	1.1	0.2	0.0
XII	16.1	12.9	10.8	3.9	1.6	0.2	0.04
Year	146	116	96	34	13	2	0.4
54. Storozh, bukhta							
I	15.5	12.4	10.3	4.7	2.8	0.8	0.4
II	13.5	10.2	8.6	4.0	1.7	0.6	0.3
III	13.3	10.2	8.3	3.7	1.9	0.7	0.2
IV	11.9	9.5	8.2	3.4	1.8	0.6	0.2
V	10.1	8.0	7.0	3.2	1.6	0.5	0.2
VI	10.8	8.7	7.2	2.6	1.1	0.4	0.2
VII	14.0	11.0	8.8	3.5	1.9	0.3	0.1
VIII	13.4	10.9	9.1	3.9	2.1	0.9	0.5
IX	11.9	9.9	8.8	4.7	3.0	1.3	0.6
X	11.7	10.4	8.8	5.4	3.4	1.8	0.9
XI	11.1	9.4	8.0	4.4	2.8	1.7	1.0
XII	13.9	11.5	9.7	5.1	2.9	1.3	0.5
Year	151	122	103	49	27	11	5
56. Sobolevo							
I	12.8	10.6	8.4	1.7	0.3	0.0	0.0
II	9.2	6.1	4.6	0.6	0.1	0.0	0.0
III	11.0	7.4	5.3	0.8	0.2	0.04	0.0
IV	14.0	10.1	7.7	2.2	0.7	0.1	0.04
V	13.1	10.1	8.5	3.5	1.6	0.3	0.1
VI	12.8	9.7	8.0	3.6	1.3	0.4	0.04
VII	15.1	11.1	9.6	5.1	2.9	0.9	0.6
VIII	16.4	12.8	11.0	5.5	3.5	1.4	0.7
IX	16.3	13.1	11.3	5.5	2.6	0.7	0.2
X	22.6	20.6	18.5	9.3	3.5	0.9	0.4
XI	21.6	19.1	16.8	5.8	1.6	0.2	0.1
XII	17.8	15.3	12.9	3.6	0.6	0.1	0.04
Year	183	146	123	47	19	5	2

Month	Precipitation (mm)						
	≥ 0.1	≥ 0.5	≥ 1.0	≥ 5.0	≥ 10.0	≥ 20.0	≥ 30.0
68. Yelizovo							
I	8.5	6.9	5.7	2.3	0.7	0.2	0.1
II	7.8	5.8	4.6	1.2	0.6	0.1	0.03
III	8.8	6.5	4.8	1.4	0.6	0.1	0.0
IV	9.2	7.1	5.8	2.1	0.8	0.1	0.1
V	10.4	9.3	8.0	3.2	1.4	0.2	0.1
VI	9.2	7.8	6.3	3.3	1.6	0.2	0.1
VII	12.9	11.1	9.6	4.4	2.3	0.6	0.2
VIII	11.4	9.7	8.6	4.3	1.9	0.6	0.3
IX	11.5	9.9	8.8	4.0	2.1	0.6	0.3
X	11.0	9.3	8.3	4.1	2.1	0.6	0.1
XI	10.0	8.5	7.1	3.2	1.7	0.4	0.2
XII	9.6	7.9	6.8	3.0	1.4	0.6	0.3
Year	120	100	84	36	17	4	2
69. Nachiki							
I	17.8	13.3	10.5	3.3	1.4	0.3	0.07
II	14.8	10.5	8.0	2.6	1.1	0.2	0.03
III	16.1	11.7	8.9	2.8	1.2	0.4	0.0
IV	15.5	10.9	8.2	2.3	0.6	0.1	0.03
V	12.9	9.5	7.5	2.4	1.0	0.2	0.03
VI	9.8	7.5	6.0	2.3	0.8	0.2	0.03
VII	13.6	10.6	9.0	4.4	2.4	0.5	0.1
VIII	13.2	10.5	9.3	4.4	2.4	0.8	0.3
IX	14.6	12.0	10.5	4.8	2.6	1.0	0.4
X	19.2	16.1	14.1	7.1	3.5	0.9	0.4
XI	19.1	16.0	13.3	5.4	2.3	0.6	0.2
XII	18.6	15.7	12.2	4.7	2.0	0.7	0.2
Year	185	144	118	46	21	6	2
77. Petropavlovsk, city I							
I	11.9	9.8	8.7	4.5	2.4	1.0	0.5
II	10.4	8.1	6.7	3.0	1.9	0.9	0.4
III	12.5	9.7	8.5	4.4	2.7	1.5	0.8
IV	10.9	9.0	7.7	4.1	2.6	1.2	0.7
V	11.4	9.3	7.8	3.5	2.1	1.1	0.3
VI	10.4	8.6	7.1	3.6	2.2	0.8	0.3
VII	12.5	10.5	9.0	4.1	2.0	0.7	0.2
VIII	13.6	11.2	10.0	5.4	3.4	1.6	0.8
IX	11.8	9.9	8.4	4.7	3.0	1.5	0.7
X	11.3	9.5	8.6	5.4	3.7	2.3	1.5
XI	11.6	9.4	8.5	5.5	3.7	2.5	1.8
XII	11.0	9.0	7.5	4.2	2.3	1.4	0.8
Year	139	114	98	52	32	16	9
83, 84. Petropavlovsk, lighthouse* I, II							
I	*12.7*	*9.6*	*7.9*	*4.3*	*1.9*	*0.7*	*0.1*
II	*11.4*	*8.8*	*6.9*	*1.9*	*1.0*	*0.5*	*0.1*
III	*12.9*	*10.5*	*8.6*	*3.2*	*1.6*	*0.4*	*0.1*
IV	10.9	8.6	6.9	2.7	1.2	0.4	0.1
V	11.3	8.7	7.1	3.0	1.2	0.3	0.1
VI	12.2	9.2	7.7	3.6	2.0	0.5	0.2
VII	14.7	11.4	9.9	5.0	2.6	0.8	0.3
VIII	13.3	10.4	8.7	4.9	3.0	1.0	0.3
IX	12.4	10.2	8.9	4.8	2.8	1.0	0.5
X	11.1	9.4	8.3	5.0	2.8	1.0	0.4
XI	*10.6*	*8.4*	*7.4*	*3.3*	*1.9*	*0.7*	*0.4*
XII	*14.0*	*11.9*	*9.9*	*4.8*	*2.6*	*0.9*	*0.4*
Year	*148*	*117*	*98*	*46*	*25*	*8*	*3*

Month	Precipitation (mm)						
	≥ 0.1	≥ 0.5	≥ 1.0	≥ 5.0	≥ 10.0	≥ 20.0	≥ 30.0
	86. Ust'-Bol'sheretsk*						
I	*18.1*	*14.5*	*11.8*	*3.2*	*1.1*	*0.2*	*0.1*
II	*13.8*	*9.9*	*6.9*	*0.7*	*0.1*	*0.1*	*0.0*
III	*15.8*	*10.5*	*6.8*	*0.7*	*0.2*	*0.1*	*0.0*
IV	15.2	8.9	6.0	1.2	0.4	0.2	0.03
V	13.5	9.1	6.8	2.4	0.9	0.1	0.03
VI	13.1	8.5	7.0	2.6	1.0	0.2	0.1
VII	16.4	11.6	9.5	4.5	2.3	0.9	0.4
VIII	17.2	13.2	10.7	5.2	2.8	1.2	0.5
IX	15.7	12.2	9.9	4.4	1.9	0.7	0.2
X	21.8	18.9	16.2	6.7	2.3	0.6	0.2
XI	*22.9*	*20.2*	*16.7*	*4.4*	*1.4*	*0.2*	*0.0*
XII	*22.1*	*17.7*	*13.8*	*3.7*	*0.4*	*0.0*	*0.0*
Year	*206*	*155*	*122*	*40*	*15*	*4*	*2*
	92. Lopatka, mys*						
I	*22.0*	*17.5*	*14.7*	*5.6*	*2.9*	*1.3*	*0.5*
II	*16.8*	*13*	*10.1*	*3.4*	*1.5*	*0.6*	*0.4*
III	*20.8*	*16.0*	*12.6*	*4.6*	*2.1*	*0.9*	*0.0*
IV	14.0	10.2	7.6	3.2	1.6	0.5	0.3
V	13.9	10.5	8.7	3.6	1.5	0.2	0.04
VI	14.9	9.6	7.8	3.3	1.4	0.4	0.04
VII	16.5	11.5	9.2	4.9	2.7	0.9	0.4
VIII	15.5	11.3	8.9	4.3	2.3	0.7	0.2
IX	14.3	11.7	9.9	5.0	2.9	1.0	0.5
X	17.4	14.4	11.9	5.6	3.2	1.0	0.2
XI	*20.6*	*17.1*	*12.6*	*3.7*	*1.9*	*0.9*	*0.2*
XII	*23.7*	*18.9*	*14.1*	*5.5*	*2.6*	*0.9*	*0.4*
Year	*210*	*162*	*128*	*53*	*27*	*9*	*3*

NOTES:

1. The data for Tigil' station (1949-1965) and Tigil' post (1946-1949) are combined in Table 8.

2. The number of days with precipitation ≥20.0 and ≥30.0 mm are not provided for all stations (see explanation for table).

3. For the stations marked with an asterisk (*), the averages for the cold period (XI-III) were only calculated based on the precipitation gauge data.

TABLE 8a
NUMBER OF DAYS WITH TRACES OF PRECIPITATION (0.0 mm)

Station No.	Station	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XI—III	IV—X	Year
1	Verkhne-Penzhino	1.4	1.6	1.9	2.1	2.3	1.7	1.6	1.1	1.2	1.8	1.6	1.1	7.6	11.8	19
4	Kamenskoye	4.4	4.5	6.0	7.1	5.4	6.2	5.5	5.6	3.5	4.3	6.3	6.3	27.5	37.6	65
7	Chemurnaut	3.0	2.9	3.9	6.3	5.9	4.8	4.0	3.9	4.4	5.4	4.5	4.8	19.1	34.7	54
9	Apuka II	4.1	2.9	2.6	3.5	4.0	4.6	4.1	3.3	2.3	4.6	3.5	3.4	16.5	26.4	43
12	Korf	2.1	2.3	2.5	2.3	4.1	2.9	2.0	2.4	2.8	3.2	3.0	3.2	13.1	19.7	33
13	Ust'-Lesnaya	3.4	3.5	4.5	4.1	3.1	2.8	3.7	2.0	2.2	2.2	2.9	2.5	16.8	20.1	37
17, 18	Keraginskiy ostrov I, II	3.4	2.3	2.8	3.9	3.2	3.0	3.3	3.0	2.6	5.1	3.6	2.7	14.8	24.1	39
21	Uka	2.9	2.6	3.4	3.5	4.8	2.8	3.9	3.0	3.0	2.9	2.8	3.2	14.9	23.9	39
23	Tigil'	5.1	3.5	4.0	5.6	4.5	4.2	3.4	3.7	3.1	3.9	4.2	3.0	19.8	28.1	48
26	Ust'-Khayryuzovo	3.4	3.2	3.0	5.0	3.8	1.9	4.1	4.1	3.0	2.4	2.5	3.2	15.3	24.3	40
30	Klyuchi	3.1	2.8	3.7	2.9	3.1	2.9	3.1	2.5	3.0	3.3	3.1	2.3	15.0	20.8	36
31	Ust'-Kamchatak	3.4	3.1	4.5	4.1	6.2	7.1	6.0	5.8	4.4	3.0	3.8	3.3	18.1	36.6	55
35	Afrika, mys	2.6	3.5	3.1	3.0	2.9	4.5	3.0	2.6	2.4	2.4	2.9	2.7	14.8	20.8	36
38	Esso	4.8	3.7	4.7	7.0	7.2	3.8	2.9	3.1	3.5	4.6	5.0	5.0	23.2	32.1	55
40	Icha	2.5	2.4	4.2	4.2	4.2	4.2	3.8	3.4	2.3	2.3	2.4	2.5	14.0	24.1	38
45, 46	Nikol'skoye (o. Beringa) I, II	4.6	3.7	4.5	5.4	4.1	4.6	4.0	3.2	2.6	3.0	3.0	3.2	19.0	26.9	46
50	Preobrazhenskoye (o. Mednyy)	2.4	2.2	2.8	3.0	2.2	3.9	3.0	2.8	2.0	2.3	2.2	2.1	11.7	19.2	31
52	Mil'kovo	3.6	4.2	5.0	5.2	5.2	4.7	4.2	3.7	3.8	3.8	?	3.0	18.4	30.6	49
69	Nachiki	3.8	3.3	4.8	5.4	4 4	4.3	3.4	3.7	3.3	3.6	.	2.9	17.3	28.1	45
77	Petropavlovsk, city I	3.3	3.7	2.8	4.5	5.1	5.2	5.9	4.3	3.5	3.2	3.0	4.0	16.8	•31.7	48
83, 84	Petropavlovsk, lighthouse I, II	3.2	3.8	4.1	3.8	3.1	3.6	2.8	3.0	2.6	3.2	3.4	3.2	17.7	22.1	40
86	Ust'-Bol'sheretsk	3.1	3.7	4.2	5.2	5.6	5.4	4.7	4.2	3.0	2.1	2.8	2.7	16.5	30.2	47
92	Lopatka, mys	5.1	6.0	5.5	5.7	5.1	4.2	4.8	4.1	3.1	3.8	4.9	6.6	28.1	30.8	59

TABLE 9

NUMBER OF DAYS WITH SOLID (s), LIQUID (l) AND MIXED (m) PRECIPITATION

Type of precip-itation	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
						1. Verkhne-Penzhino							
s	10.6	6.5	6.9	6.6	5.3	0.3			1.2	7.0	9.1	8.9	62
l				•	0.2	5.4	8.3	6.9	3.7	0.6			25
m	0.2	•	0.6	0.1	0.6	0.7			0.9	0.2	0.2	0.3	4
						4. Kamenskoye							
s	16.0	10.8	12.5	11.8	6.1	0.1			0.5	11.1	13.3	13 9	96
l				0.3	2.1	7.9	10.9	11.9	9.7	1.1		0.1	44
m	0.5	0.3	0.2	0.2	1.9	0.4			1.2	1.2	0.9	0.3	7
						7. Chemurnaut							
s	21.9	16.3	18.5	16.4	7.0	0.1			0.1	12.3	19.0	17.5	129
l				0.1	1.3	7.1	9.8	11.8	11.0	3.8		0.2	45
m	6.8	0.1	0.4	0.7	3.8	0.3			0.3	3.4	0.7	0.8	11
						12. Korf							
s	9.8	6.6	7.7	7.4	3.8	•			0.1	3.7	5.6	7.1	52
l					1.5	6.3	9.3	9.9	8.1	2.6	•	0.1	38
m	0.9	0.3	0.2	0.3	1.7	•			•	1.7	0.5	0.2	6
						13. Ust'-Lesnaya							
s	11.1	7.8	8.7	9.1	3.4				0.5	10.4	14.7	12.4	78
l				0.2	1.8	7.6	11.0	13.5	10.9	4.9	0.2	0.1	50
m	0.3			0.6	1.8	0.4			0.5	3.2	1.2	0.3	9
						17, 18. Karaginskiy ostrov I, II							
s	16.3	5.8	13.8	12.1	5.6				0.3	3.9	13.2	17.2	88
l	0.1		•	0.1	2.0	7.4	10.9	12.4	10.8	6.0	1.2	0.1	51
m	1.2	•	0.5	0.7	2.5	0.4			0.2	2.3	2.8	1.4	12
						21. Uka							
s	18.3	15.7	15.4	11.8	5.8	0.3				4.0	11.1	16.3	99
l				0.1	1.5	9.6	12.1	13.3	10.9	6.0	0.9	0.3	55
m	1.1	0.7	0.2	0.8	3.1	0.6			•	2.1	2.9	1.0	12
						23. Tigil'							
s	13.1	9.5	9.5	9.1	3.8					10.0	15.2	14.4	85
l		0.1		0.5	2.8	8.7	11.5	12.7	13.0	4.7	0.2		54
m	0.2	0.2	0.1	0.7	2.3	0.5			0.6	3.0	1.1	0.5	9
						26. Ust'-Khayryuzovo							
s	13.4	10.5	11.3	11.3	4.1	0.1			0.1	8.3	17.2	16.6	93
l	0.1		•	0.5	3.3	9.8	14.0	14.4	14.0	8.4	0.9	•	65
m	•	•	0.1	1.2	2.2	0.3			0.4	4.7	1.4	0.3	11
						30. Klyuchi							
s	12.8	11.6	9.6	7.1	2.6	•			0.1	2.8	8.4	12.8	68
l	•			0.1	2.5	7.8	11.0	10.9	9.3	3.3	0.5	•	45
m	0.3	0.1	0.1	0.8	1.9	0.2			0.1	1.6	1.0	0.4	6
						34. Ust'-Kamchatsk							
s	17.6	16.6	14.0	10.7	4.8	•			•	1.9	8.6	16.0	90
l	0.1	•		0.3	3.0	9.5	13.6	13.2	11.2	7.2	1.6	0.4	69
m	1.2	0.6	0.6	1.4	3.3	0.6			0.1	2.1	3.2	1.0	14
						35. Afrika, mys							
s	17.8	15.5	17.4	12.6	5.1				0.1	2.8	10.1	17.5	99
l	0.2	0.1		0.5	3.6	13.5	17.4	16.5	14.2	10.0	3.3	0.3	80
m	2.8	1.4	0.8	1.9	4.7	0.7			0.1	2.8	3.9	1.7	21

Type of precip-itation	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
38. Esso													
s	14.2	12.4	9.9	9.6	5.8	0.2			0.5	13.2	15.8	16.0	98
l				0.2	1.6	9.8	14.4	13.5	10.4	1.8	0.1	0.1	52
m				0.4	2.2	1.0			1.2	2.2	0.3	0.2	8
40. Icha													
s	12.3	9.6	12.0	11.8	3.7	•			0.7	5.5	15.6	15.3	87
l				0.7	3.7	10.4	15.0	14.8	13.5	9.0	1.4	0.1	69
m	0.1	0.1	0.1	1.2	3.0	0.5			0.2	6.4	1.7	0.4	14
45, 46. Nikol'skoye (o. Beringa) I, II													
s	19.1	17.6	18.6	11.4	3.2					3.0	12.0	19.2	104
l	1.0	0.3	0.1	1.3	6.3	12.3	15.6	16.5	15.0	13.4	4.8	1.4	88
m	2.7	2.2	2.2	3.8	4.4				0.2	2.8	5.6	3.3	27
50. Preobrazhenskoye (o. Mednyy)													
s	19.9	20.3	19.9	12.9	3.7					2.9	12.5	20.2	112
l	1.2	0.4	0.2	1.8	7.5	14.3	15.1	17.3	15.7	14.2	4.5	1.6	94
m	3.0	2.4	2.7	4.8	4.8	0.2			0.3	3.7	5.0	2.8	34
52. Mil'kovo													
s	16.0	14.2	11.6	9.2	2.9					5.3	11.4	15.8	86
l		0.1		0.1	2.9	10.7	12.7	11.1	10.0	2.9	0.1	0.2	51
m	0.4		0.1	0.5	2.9	0.6			0.2	1.5	0.8	0.5	8
69. Nachiki													
s	15.0	14.2	16.0	12.8	7.0	0.4			0.1	7.5	17.7	18.2	109
l			•	0.2	1.9	8.4	13.3	13.0	13.6	6.1	0.2		57
m				0.7	2.5	0.9			0.2	4.5	1.4	0.5	11
77. Petropavlovsk, City I													
s	11.1	9.0	14.2	8.3	2.2					1.0	8.3	9.5	64
l				0.3	4.4	11.8	11.9	14.1	12.0	9.3	1.8	0.4	66
m	1.0	0.8	0.7	1.9	4.9	0.4				1.8	3.2	1.3	16
83, 84. Petropavlovsk, lighthouse I, II													
s	10.8	9.2	11.2	8.6	4.4					1.3	7.1	10.2	63
l				0.3	3.3	10.2	13.4	12.4	12.1	7.1	1.5	0.1	60
m	0.5	0.2	0.2	1.1	3.0	0.4				1.5	2.0	1.0	10
86. Ust'-Bol'sheretsk													
s	15.8	11.9	14.1	11.8	3.7	•				2.6	14.9	19.8	95
l	0.1	•	•	0.6	5.2	12.4	17.3	17.4	15.1	13.2	1.9	0.2	83
m	0.4	0.1	0.6	2.0	4.1	0.3			0.2	5.4	4.0	0.6	18
92. Lopatka, mys													
s	16.6	12.7	15.7	9.8	4.0	0.1				1.7	11.4	16.2	88
l	0.9	•	0.1	0.8	4.7	13.2	15.4	15.3	14.2	12.7	4.0	0.5	82
m	0.1	0.4	0.9	2.9	3.9	0.4				3.2	3.4	1.7	17

NOTE: The point (•) indicates the number of days ≤0.05.

TABLE 10

AVERAGE (1st LINE) AND MAXIMUM (2nd LINE) DURATION OF PRECIPITATION (HOURS)

Station No.	Station	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
1	Verkhne-Penzhino	184	120	116	104	82	60	81	84	101	134	148	143	1357
		326	259	318	182	178	123	124	122	212	225	322	265	1832
9	Apuka II	136	111	122	129	102	92	137	141	102	108	107	115	1402
		270	252	291	290	177	145	203	248	184	189	214	228	2018
17, 18	Karaginskiy ostrov I, II	247	239	225	176	138	78	93	101	99	147	198	230	1971
		373	392	426	286	289	147	192	178	155	238	328	368	2691
26	Ust'-Khayryuzovo	164	121	136	152	99	94	154	152	137	235	229	190	1863
		307	255	304	285	158	184	260	213	314	359	386	290	2520
34	Ust'-Kamchatsk	261	240	200	170	146	114	132	129	105	124	164	237	2022
		418	368	342	280	281	240	236	221	240	228	302	378	2576
36	Kozyrevsk	153	126	91	87	63	60	75	72	70	76	105	185	1163
		274	193	177	162	116	118	134	121	153	150	205	261	1474
38	Esso	161	147	123	116	89	86	113	99	100	166	183	202	1585
		335	283	245	190	150	177	171	169	185	233	273	259	1894
52	Mil'kovo	238	211	153	108	91	93	106	92	82	94	154	234	1656
		373	348	245	212	146	182	247	155	160	183	287	355	1982
61	Ganaly	153	98	133	152	110	72	103	93	128	179	177	215	1613
		226	225	289	224	200	136	185	135	244	306	292	328	2140
77, 78	Petropavlovsk, city I, II	130	119	145	122	116	106	128	116	119	99	116	139	1455
		239	265	247	265	177	206	248	231	184	182	290	226	1634
86	Ust'-Bol'sheretsk	172	133	156	152	126	120	180	169	124	175	198	198	1903
		391	284	343	257	200	194	276	287	235	242	368	358	2163
92	Lopatka, mys	148	103	162	130	126	143	173	142	112	120	139	136	1634
		352	277	337	284	262	253	360	218	178	213	216	240	2301

APPENDIX

TO TABLES 1 AND 1a

APPENDIX TO TABLES 1 AND 1a

DATES WHEN RAIN GAUGE WAS REPLACED BY PRECIPITATION METER, TYPE OF PROTECTION OF INSTRUMENT AND CORRECTION FACTORS FOR DATA OF INSTRUMENT OBSERVATIONS (K_1, K_2, K_3) INTRODUCED INTO THE DATA IN TABLES 1 AND 1a

Station No.	Station	Date	Type	Coefficients	I	II	III	IV	V
1	Verkhne-Penzhino	18 VII 1952	III	K_1	1.21	1.19	1.21	1.22	1.10
				K_2	1.36	1.35	1.36	1.39	1.19
				K_3	0.09	0.15	0.15	0.15	0.22
2	Slautnoye		III	K_2	1.85	1.72	1.68	1.80	1.45
				K_3	0.09	0.11	0.12	0.15	0.22
4	Kamenskoye		IIa	K_2					1.40
				K_3					0.22
7	Chemurnaut		IIa	K_2					1.42
				K_3					0.19
8, 9	Apuka I, II	15 VIII 1953	IV	K_1				2.66	1.26
				K_2					1.31
				K_3					0.13
10	Tilichiki	rain gauge	IV	K_1	2.24	2.24	2.31	1.72	1.16
				K_2	1.86	1.95	1.88	1.57	1.22
				K_3	0.09	0.10	0.11	0.10	0.15
11	Topata-Olyutorskaya		IV	K_2					1.35
				K_3					0.14
12	Korf	24 X 1951	IV	K_1				2.43	1.53
				K_2				1.91	1.47
				K_3				0.10	0.15
13	Ust'-Lesnaya	1 I 1951	IV	K_1	1.69	1.63	1.64	1.52	1.19
				K_2	2.14	2.04	2.06	1.71	1.39
				K_3	0.17	0.12	0.15	0.15	0.15
14	Ossora	11 X 1950	IV	K_1	2.03	2.14	1.97	1.56	1.40
				K_2	1.88	1.95	1.86	1.59	1.24
				K_3	0.10	0.12	0.12	0.13	0.14
16	Ust-palana		IV	K_2				1.82	1.40
				K_3				0.15	0.15
17, 18	Karaginskiy ostrov I, II	1 XI 1950	IV	K_1	1.76	1.83	1.64	1.52	1.22
				K_2					1.37
				K_3					0.08
19	Ust'-Voyampolka	19 VIII 1949	IV	K_1	1.66	1.59	1.58	1.42	1.16
				K_2	2.08	2.06	2.06	1.57	1.32
				K_3	0.15	0.10	0.11	0.12	0.14
20	Korn	4 IV 1956	III	K_2					1.32
				K_3					0.14
21	Uka	29 VII 1953	V	K_1	1.91	1.91	1.70	1.52	1.06
				K_2	1.84	1.84	1.74	1.52	1.18
				K_3	0.07	0.12	0.11	0.12	0.12
22	Napana	18 V 1955	II6	K_2				1.29	1.18
				K_3				0.11	0.14
23	Tigil'	1 XI 1949	II6	K_2	1.39	1.32	1.42	1.29	1.18
				K_3	0.10	0.12	0.14	0.11	0.14
24	Ozernoy, mys		IV	K_2	2.22	2.22	2.00	1.60	1.24
				K_3	0.05	0.07	0.09	0.08	0.11
25	Ptichiy ostrov		IV	K_2					1.41
				K_3					0.12
26	Ust'-Khayryuzovo	1 VII 1951	IV	K_1	1.64	1.62	1.68	1.53	1.23
				K_2	2.04	2.09	2.08	1.71	1.37
				K_3	0.10	0.14	0.14	0.10	0.12
27	Khayryuzovo		II6	K_2				1.71	1.37
				K_3				0.10	0.12
28	Belogolovoye		IIa	K_2					1.37
				K_3					0.12
29	Kharchino	29 XI 1954	III	K_1	1.58	1.58	1.58	1.49	1.20

VI	VII	VIII	IX	X	XI	XII	XI—III	IV—X	Year
1.00	1.00	1.00	1.03	1.17	1.20	1.20	1.18	0.95	1.02
1.04	1.03	1.03	1.04	1.30	1.35	1.35			
0.20	0.10	0.09	0.14	0.10	0.13	0.13	1.49	1.23	1.32
1.07	1.05	1.04	1.04	1.42	1.70	1.66			
0.20	0.10	0.10	0.10	0.10	0.12	0.12	1.84	1.30	1.49
1.10	1.07	1.06	1.16	1.49					
0.20	0.10	0.08	0.12	0.11				1.35	
1.11	1.10	1.08	1.09						
0.20	0.10	0.07	0.12					1.27	
1.00	1.00	1.00	1.00	1.55				1.05	
1.08	1.07	1.06	1.06						
0.13	0.07	0.07	0.07					1.18	
1.00	1.00	1.00	1.00	1.45	1.70	1.94	2.86	1.12	1.52
1.07	1.06	1.05	1.04	1.27	1.70	1.86			
0.14	0.06	0.07	0.10	0.08	0.07	0.09	1.86	1.26	1.52
1.09	1.08	1.06	1.06	1.09					
0.13	0.07	0.07	0.07	0.08				1.62	
1.00	1.00	1.00	1.00	1.59				1.17	
1.08	1.08	1.06	1.08						
0.14	1.06	0.07	0.10					1.34	
1.00	1.00	1.00	1.00	1.21	1.69	1.69	1.92	0.95	1.09
1.10	1.08	1.07	1.08	1.42	1.94	2.14			
0.16	0.08	0.08	0.12	0.09	0.11	0.14	2.18	1.30	1.52
1.03	1.03	1.03	1.03	1.24	1.56	2.00	1.77	1.06	1.25
1.08	1.07	1.06	1.06	1.43	1.89	1.88			
0.14	0.05	0.06	0.10	0.08	0.08	0.10	1.99	1.30	1.57
1.09	1.07	1.07	1.08	1.47					
0.14	0.08	0.08	0.10	0.09				1.32	1.54
1.00	1.00	1.00	1.00	1.11	1.51	1.86	1.98	1.12	1.47
1.07	1.06	1.06	1.07						
0.13	0.04	0.05	0.09					1.19	
1.02	1.02	1.02	1.02	1.22	1.47	1.70	1.83	1.04	1.17
1.08	1.06	1.06	1.07	1.36	1.75	2.14			
0.12	0.09	0.08	0.10	0.09	0.14	0.10	2.07	1.28	1.55
1.08	1.06	1.06	1.07						
0.12	0.09	0.08	0.10					1.27	
1.00	1.00	1.00	1.00	1.21	1.66	1.94	1.86	1.06	1.31
1.15	1.15	1.14	1.15	1.29	1.51	1.88			
0.13	0.05	0.05	0.10	0.07	0.07	0.09	1.85	1.27	1.53
1.04	1.03	1.03	1.03	1.16					
0.14	0.08	0.08	0.08	0.09				1.18	
1.04	1.03	1.03	1.03	1.16	1.42	1.42			
0.14	0.08	0.08	0.08	0.09	0.10	0.10	1.51	1.18	1.27
1.04	1.04	1.04	1.06	1.19	1.62	2.22			
0.10	0.04	0.04	0.08	0.07	0.06	0.07	2.11	1.24	1.59
1.10	1.09	1.08	1.08						
0.12	0.08	0.08	0.07					1.20	
1.05	1.05	1.05	1.05	1.24	1.52	1.62	1.72	1.10	1.22
1.10	1.08	1.07	1.07	1.41	1.68	2.00			
0.10	0.09	0.08	0.08	0.08	0.14	0.08	2.00	1.30	1.50
1.10	1.08	1.07	1.07	1.41					
0.10	0.09	0.08	0.08	0.08				1.30	
1.10	1.08	1.07	1.07						
0.10	0.09	0.08	0.08					1.19	
1.00	1.00	1.00	1.00	1.10	1.49	1.58	1.55	1.03	1.25

Station No.	Station	Date	Type	Coefficients	I	II	III	IV	V
30	Klyuchi	1 I 1951	IIa	K_1	1.62	1.59	1.65	1.53	1.08
				K_2	1.85	1.83	1.90	1.63	1.20
				K_3	0.06	0.05	0.08	0.08	0.14
31	Bol'shiye Shcheki		IIб	K_2				1.63	1.20
				K_3				0.08	0.14
32	Kozyrevskiy sovkhoz	21 VIII 1954	IIa	K_2	1.52	1.60	1.65	1.44	1.24
				K_3	0.06	0.08	0.10	0.11	0.12
33	Nizhne-Kamchatsk	13 III 1956	IIa	K_2				1.50	1.17
				K_3				0.07	0.12
34	Ust'-Kanchatsk	1 VIII 1950	IIa	K_1	2.01	1.93	1.83	1.55	1.12
				K_2	1.98	1.94	1.86	1.50	1.17
				K_3	0.04	0.05	0.07	0.07	0.12
35	Afrika, mys	1 I 1952	IV	K_1				2.19	1.17
				K_2				1.80	1.25
				K_3				0.06	0.10
36	Kozyrevsk	1 XI 1951	IIa	K_1	1.21	1.23	1.30	1.25	1.12
				K_2	1.42	1.48	1.58	1.40	1.26
				K_3	0.06	0.08	0.10	0.16	0.16
38	Esso	23 V 1951	IIб	K_1	1.12	1.13	1.13	1.15	1.11
				K_2	1.27	1.30	1.30	1.24	1.21
				K_3	0.06	0.10	0.11	0.12	0.14
39	Sredne-Kamchatsk	1 VI 1952	IIa	K_2				1.16	1.06
				K_3				0.12	0.16
40	Icha	23 X 1953	IV	K_1	1.56	1.51	1.58	1.40	1.19
				K_2	1.93	1.86	1.96	1.55	1.36
				K_3	0.09	0.14	0.14	0.14	0.12
41	Icha, post	1 II 1954	IV	K_2				1.55	1.36
				K_3				0.14	0.12
42	Tolbachik	6 VI 1956	IIa	K_1	1.24	1.24	1.24	1.20	1.04
				K_2				1.16	1.06
				K_3				0.12	0.16
43	Shchapino	9 II 1956	IIб	K_2	1.09	1.14	1.21	1.16	1.06
				K_3	0.06	0.08	0.10	0.12	0.16
44	Nizhne-Oblukovino	26 XII 1953	IIa	K_1	1.55	1.55	1.55	1.36	1.18
45, 46	Nikol'skoye (o. Beringa) I, II	1 I 1951	IV	K_1				2.08	1.80
				K_2					1.15
				K_3					0.18
47	Dolinovka	1 XI 1951	IIa	K_1	1.00	1.00	1.08	1.07	1.01
				K_2	1.09	1.14	1.21	1.16	1.06
				K_3	0.06	0.08	0.10	0.12	0.16
48	Krutogrovo	17 VI 1953	III	K_1	1.30	1.30	1.30	1.20	1.10
				K_2				1.55	1.36
				K_3				0.14	0.12
49	Kronotskoye ozero		Ia	K_2	1.28	1.23	1.26	1.20	1.11
				K_3	0.05	0.06	0.06	0.07	0.05
50	Preobrazhenskoye (o. Mednyy)		IIб	K_1	1.98	1.88	1.88	1.55	1.24
				K_2					1.17
				K_3					0.18
51	Mil'kovo, exp. agr. sta.	12 X 1949	IIa	K_1	1.06	1.06	1.10	1.11	1.02
				K_2	1.12	1.16	1.26	1.20	1.09
				K_3	0.06	0.08	0.10	0.12	0.16
52	Mil'kovo	1 I 1951	IIб	K_1	1.06	1.08	1.12	1.17	1.03
				K_2	1.14	1.18	1.26	1.25	1.09
				K_3	0.06	0.08	0.10	0.18	0.16
53	Verkhne-Kamchatsk	6 IV 1952	IIб	K_2	1.14	1.18	1.26	1.25	1.09
				K_3	0.06	0.08	0.10	0.18	0.16
54	Storozh, bukhta	13 VI 1953	III	K_1	1.50	1.49	1.52	1.23	1.00
				K_2	1.82	1.80	1.82	1.38	1.06
				K_3	0.03	0.05	0.04	0.08	0.04
55	Sharomy	11 VII 1956	IIб	K_2				1.25	1.09
				K_3				0.18	0.16

VI	VII	VIII	IX	X	XI	XII	XI—III	IV—X	Year
1.01	1.01	1.01	1.01	1.12	1.55	1.55	1.63	1.06	1.27
1.07	1.06	1.05	1.05	1.23	1.74	1.77			
0.12	0.08	0.06	0.09	0.05	0.04	0.05	1.86	1.23	1.53
1.07	1.06	1.05	1.05	1.23					
0.12	0.08	0.06	0.09	0.05				1.24	
1.06	1.01	1.03	1.03	1.19	1.48	1.53			
0.12	0.08	0.08	0.09	0.05	0.05	0.06	1.60	1.20	1.36
1.08	1.07	1.05	1.05	1.17					
0.10	0.05	0.05	0.06	0.05				1.21	
1.03	1.03	1.03	1.03	1.13	1.52	1.89	1.97	1.18	1.50
1.08	1.07	1.05	1.05	1.17	1.51	1.90			
0.10	0.05	0.05	0.06	0.05	0.04	0.04	1.89	1.21	1.57
1.00	1.00	1.00	1.00	1.00				1.02	
1.09	1.09	1.07	1.07	1.09					
0.08	0.04	0.04	0.05	0.05				1.26	
1.00	1.00	1.00	1.00	1.05	1.15	1.17	1.49	0.99	1.14
1.06	1.04	1.02	1.02	1.13	1.32	1.35			
0.12	0.08	0.08	0.09	0.05	0.05	0.06	1.46	1.18	1.30
1.00	1.00	1.00	1.02	1.08	1.11	1.12	1.17	0.93	1.00
1.03	1.03	1.02	1.06	1.17	1.25	1.27			
0.14	0.08	0.08	0.12	0.04	0.14	0.14	1.39	1.17	1.24
1.02	1.01	1.01	1.01	1.07					
0.12	0.08	0.08	0.09	0.10				1.13	
1.00	1.00	1.00	1.00	1.24	1.48	1.64	1.61	1.04	1.15
1.09	1.08	1.06	1.07	1.40	1.70	2.06			
0.10	0.09	0.08	0.08	0.05	0.09	0.16	1.98	1.30	1.50
1.09	1.08	1.06	1.07	1.40					
0.10	0.09	0.08	0.08	0.05				1.30	
1.00	1.00	1.00	1.00	1.08	1.24	1.24	1.12	1.10	1.11
1.02	1.01	1.01	1.01	1.07					
0.12	0.08	0.08	0.09	0.08				1.13	
1.02	1.01	1.01	1.01	1.07	1.12	1.12			
0.12	0.08	0.08	0.09	0.08	0.06	0.05	1.19	1.13	1.15
1.00	1.00	1.00	1.00	1.18	1.45	1.55	1.61	1.14	1.25
1.10	1.10	1.10	1.10	1.10					
1.14	1.13	1.09	1.09						
0.13	0.06	0.06	0.06					1.20	
1.00	1.00	1.00	1.00	1.03	1.00	1.00	1.00	1.07	1.04
1.02	1.01	1.01	1.01	1.07	1.12	1.12			
0.12	0.08	0.08	0.09	0.08	0.06	0.05	1.19	1.13	1.15
1.00	1.00	1.00	1.00	1.10	1.20	1.30	0.96	0.78	0.82
1.09	1.08	1.06	1.07	1.40					
0.13	0.08	0.08	0.08	0.07				1.30	
1.02	1.02	1.02	1.02	1.11	1.30	1.30			
0.10	0.06	0.06	0.04	0.04	0.04	0.04	1.33	1.12	1.21
1.10	1.10	1.10	1.10	1.10	1.53	1.79	1.53	1.23	1.37
1.07	1.06	1.06	1.06						
0.13	0.06	0.06	0.06					1.17	
1.00	1.00	1.00	1.00	1.03	1.07	1.06	1.13	0.97	1.04
1.02	1.02	1.01	1.02	1.10	1.16	1.14			
0.12	0.08	0.08	0.09	0.08	0.06	0.05	1.22	1.14	1.18
1.00	1.00	1.00	1.00	1.05	1.08	1.07	1.08	0.97	1.03
1.03	1.02	1.02	1.02	1.14	1.19	1.16			
0.12	0.08	0.08	0.09	0.08	0.06	0.05	1.24	1.16	1.17
1.03	1.02	1.02	1.02	1.14	1.19	1.16			
0.12	0.08	0.08	0.09	0.08	0.06	0.05	1.24	1.17	1.20
1.00	1.00	1.00	1.00	1.00	1.31	1.49	1.40	0.99	1.17
1.05	1.03	1.03	1.04	1.04	1.47	1.80			
0.08	0.05	0.05	0.02	0.03	0.03	0.01	1.76	1.13	1.45
1.03	1.02	1.02	1.02	1.14					
0.12	0.08	0.08	0.09	0.08				1.16	

Station No.	Station	Date	Type	Coefficients	I	II	III	IV	V
56	Sobolevo	1 I 1951	IIa	K_1	1.21	1.22	1.28	1.23	1.09
				K_2	1.44	1.46	1.55	1.46	1.21
				K_3	0.09	0.14	0.14	0.14	0.10
57	Pushchino		II6	K_2	1.30	1.30	1.44	1.43	1.19
				K_3	0.06	0.10	0.10	0.12	0.10
58	Sobolevskiy sovkhoz	30 VIII 1955	III	K_2				1.46	1.21
				K_3				0.14	0.10
59	Semlyachiki	17 VI 1953		K_1				2.10	1.22
				K_2				1.74	1.25
				K_3				0.05	0.03
60	Privol'noye	26 I 1957		K_2				1.46	1.21
				K_3				0.14	0.10
61	Ganaly		II6	K_2	1.54	1.48	1.50	1.35	1.18
				K_3	0.07	0.10	0.10	0.12	0.12
62	Shakhty	rain gauge	II6	K_1	1.21	1.21	1.21	1.13	1.00
63	Kikhchik	15 X 1954	IV	K_1	1.56	1.54	1.62	1.46	1.20
				K_2	1.92	1.90	2.04	1.55	1.38
				K_3	0.08	0.12	0.13	0.14	0.12
64	Kikhchik, post	25 III 1957	III	K_2				1.55	1.38
				K_3				0.14	0.12
65	Malka	14 VIII 1956	II6	K_1	1.27	1.27	1.27	1.22	1.12
				K_2	1.42	1.40	1.54	1.40	1.20
				K_3	0.06	0.08	0.09	0.08	0.09
66	Koryaki	1 II 1961	II6	K_2				1.29	1.10
				K_3				0.09	0.06
67	Nachikinskiy sovkhoz	10 VIII 1956	IIa	K_2				1.44	1.20
				K_3				0.08	0.09
68	Yelizovo	21 VI 1951	IIa	K_1	1.39	1.34	1.42	1.24	1.11
				K_2	1.46	1.42	1.40	1.29	1.10
				K_3	0.03	0.06	0.04	0.09	0.06
69	Nachiki	1 I 1951	II6	K_1	1.21	1.20	1 29	1.30	1.09
				K_2	1.42	1.40	1.54	1.44	1.20
				K_3	0.06	0.08	0.09	0.08	0.09
71	Kamchatskaya agro		II6	K_2	1.28	1.26	1.36	1.28	1.08
				K_3	0.03	0.06	0.04	0.09	0.06
72	Perevesnyy	1 XI 1953	III	K_2				1.45	1.17
				K_3				0.14	0.15
73	Nachikinskoye ozero	10 VII 1954	I6	K_1	1.15	1.15	1.26	1.24	1.09
				K_2	1.35	1.35	1.50	1.36	1.19
				K_3	0.06	0.08	0.09	0.08	0.09
74	Dal'nyy sovkhoz	14 III 1959	II6	K_1	1.60	1.60	1.60	1.40	1.10
				K_2				1.29	1.10
				K_3				0.09	0.06
75	Nikolayevka	30 IX 1952	I6	K_2	1.46	1.42	1.40	1.29	1.10
				K_3	0.03	0.06	0.04	0.09	0.06
77	Petropavlovsk, city I,	1 I 1951	IIa	K_1	1.33	1.39	1.54	1.33	1.11
				K_2	1.28	1.32	1.34	1.23	1.11
				K_3	0.03	0.06	0.05	0.06	0.05
79	Apacha	1 I 1951	II6	K_1	1.46	1.42	1.37	1.29	1.05
				K_2	1.72	1.67	1.61	1.44	1.13
				K_3	0.05	0.08	0.08	0.12	0.14
80	Paratunka	29 VI 1951	IIa	K_2				1.29	1.10
				K_3				0.09	0.06
81	Bol'sheretskiy sovkhoz		III	K_2					1.17
				K_3					0.15
82	Nachilovo	13 VI 1956	III	K_2				1.45	1.17
				K_3				0.14	0.15
83, 84	Petropavlovsk, lighthouse I, II	1 I 1951	IV	K_1				2.78	1.56
				K_2					1.41
				K_3					0.05
85	Bol'sheretsk		III	K_2	2.00	1.97	2.05	1.80	1.23
				K_3	0.09	0.11	0.12	0.15	0.14

VI	VII	VIII	IX	X	XI	XII	XI - III	IV---X	Year
1.00	1.00	1.00	1.00	1.20	1.18	1.25	1.25	0.91	1.01
1.05	1.05	1.04	1.04	1.22	1.33	1.50			
0.12	0.09	0.08	0.07	0.05	0.10	0.08	1.53	1.22	1.30
1.05	1.04	1.03	1.03	1.19	1.35	1.35			
0.12	0.07	0.07	0.09	0.08	0.06	0.06	1.41	1.21	1.32
1.05	1.05	1.04	1.04	1.22					
0.12	0.09	0.08	0.07	0.05				1.22	
1.00	1.00	1.00	1.00	1.11					
1.05	1.04	1.04	1.06	1.23					
0.10	0.05	0.05	0.02	0.02				1.25	
1.05	1.05	1.04	1.04	1.22					
0.12	0.09	0.08	0.07	0.05				1.22	
1.04	1.03	1.02	1.02	1.14	1.35	1.48			
0.14	0.07	0.07	0.10	0.08	0.05	0.06	1.52	1.21	1.29
1.00	1.00	1.00	1.00	1.03	1.17	1.21	1.20	1.01	1.08
1.00	1.00	1.00	1.00	1.25	1.53	1.72	1.50	1.11	1.22
1.09	1.07	1.06	1.07	1.63	1.77	2.17			
0.13	0.09	0.08	0.08	0.05	0.07	0.09	2.02	1.36	1.60
1.09	1.07	1.06	1.07	1.63					
0.13	0.09	0.08	0.08	0.05				1.37	
1.00	1.00	1.00	1.00	1.13	1.27	1.27	1.19	1.30	1.27
1.04	1.04	1.03	1.03	1.18	1.36	1.40			
0.12	0.07	0.07	0.06	0.05	0.03	0.06	1.45	1.55	1.27
1.04	1.03	1.02	1.02	1.09					
0.08	0.06	0.06	0.04	0.04				1.16	
1.04	1.04	1.03	1.03	1.18					
0.12	0.07	0.07	0.06	0.05				1.50	
1.00	1.00	1.00	1.00	1.05	1.22	1.36	1.16	1.07	1.10
1.04	1.03	1.02	1.02	1.09	1.27	1.42			
0.08	0.06	0.06	0.04	0.04	0.02	0.02	1.41	1.12	1.22
1.00	1.00	1.00	1.00	1.10	1.17	1.20	1.21	1.02	1.10
1.04	1.04	1.03	1.03	1.18	1.36	1.40			
0.12	0.07	0.07	0.06	0.05	0.03	0.06	1.47	1.19	1.32
1.03	1.02	1.02	1.03	1.11	1.19	1.34			
0.08	0.06	0.06	0.04	0.04	0.03	0.02	1.31	1.12	1.19
1.06	1.05	1.04	1.04	1.27					
0.14	0.08	0.08	0.06	0.06				1.23	
1.00	1.00	1.00	1.00	1.08	1.14	1.14	1.19	1.02	1.09
1.03	1.03	1.02	1.03	1.17	1.32	1.32			
0.12	0.07	0.07	0.06	0.05	0.03	0.06	1.42	1.18	1.28
1.00	1.00	1.00	1.00	1.11	1.50	1.60	1.28	1.10	1.16
1.04	1.03	1.02	1.02	1.03					
0.08	0.06	0.06	0.04	0.04				1.12	
1.04	1.03	1.02	1.02	1.09	1.25	1.42			
0.08	0.06	0.06	0.04	0.04	0.03	0.02	1.41	1.19	1.24
1.00	1.00	1.00	1.00	1.07	1.13	1.27	1.28	1.05	1.17
1.03	1.02	1.02	1.02	1.08	1.13	1.20			
0.10	0.06	0.07	0.04	0.04	0.04	0.03	1.29	1.13	1.21
1.00	1.00	1.00	1.00	1.09	1.22	1.46	1.36	1.02	1.11
1.05	1.04	1.03	1.04	1.12	1.35	1.72			
0.13	0.07	0.07	0.06	0.06	0.03	0.06	1.65	1.18	1.33
1.04	1.03	1.02	1.02	1.09					
0.08	0.06	0.06	0.04	0.04				1.26	
1.06	1.05	1.04	1.04						
0.14	0.08	0.08	0.06					1.15	
1.06	1.05	1.04	1.04	1.27					
0.14	0.08	0.08	0.06	0.06				1.23	
1.20	1.20	1.20	1.20	1.60				1.45	
1.10	1.10	1.08	1.10						
0.10	0.06	0.07	0.04					1.33	
1.09	1.07	1.07	1.06	1.09	1.77	2.19			
0.14	0.08	0.08	0.07	1.08	0.04	0.08	2.05	1.24	1.50

Station No.	Station	Date	Type	Coefficients	I	II	III	IV	V
86	Ust'-Bol'sheretsk	29 X 1952	IV	K_1	2.75	2.70	3.00	1.57	1.26
				K_2					1.42
				K_3					0.10
87	Povorotnyy, mys	1 I 1951	Ia	K_1	1.96	1.84	1.84	1.23	1.00
88	Khodutka		IIa	K_2	1.74	1.74	1.72	1.50	1.15
				K_3	0.04	0.06	0.05	0.08	0.08
89	Ozernaya I	1 II 1952	IIa	K_1	1.86	1.80	1.95	1.42	1.00
				K_2					1.08
				K_3					0.12
92	Lopatka, mys	1 I 1952	IV	K_1				1.98	1.21

VI	VII	VIII	IX	X	XI	XII	XI--III	IV-X	Year
1.05	1.05	1.05	1.05	1.21	1.72	3.40	2.12	1.10	1.35
1.09	1.08	1.06	1.08						
0.14	0.08	0.08	0.06					1.20	
1.00	1.00	1.00	1.00	1 00	1.19	1.53	0.85	1.34	1.06
1.05	1.05	1.04	1.04	1.11	1.22	1.49			
0.10	0.06	0.07	0.04	0.05	0.04	0.04	1.59	1.21	1.39
1.00	1.00	1.00	1.00	1.13	1.52	1.85	1.80	1.28	1.49
1.06	1.05	1.04	1.04						
0.14	0.08	0.08	0.06					1.14	
1.00	1.00	1.00	1.00	1.21				1.21	

NOTES: K_1 - the transfer coefficient from the rain gauge readings to the precipitation gauge readings (K_1 is not given for those points where only precipitation gauge data were used or the precipitation of the cold period was calculated based on the data of the closest station according to isomers). K_2 -the correction factor for insufficient account of precipitation. K_3 - correction for wetting.

In the columns for the cold (XI-III) and hot (IV-X) periods and the year line K_3 gives the total correction $K_2 + K_3$.

The empty columns for K_2 and K_3 indicate that the precipitation for the cold period was calculated based on the data from the closest points (by isomers), while the empty column "Date" indicates that only precipitation gauge data were used.

SECTION 3

SNOW COVER

TABLE 1

AVERAGE TEN-DAY DEPTH OF SNOW COVER (cm) ACCORDING TO PERMANENT ROD (cm)

Station No.	Station	IX			X			XI			XII			I		
		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
1	Verkhne-Penzhino	•	•	1	2	7	14	18	22	23	27	32	35	35	38	42
2	Slautnoye		•	•	3	7	13	15	16	16	17	18	18	19	19	20
4	Kamenskoye			•	•	1	5	9	13	16	20	21	21	21	21	22
7	Chemurnaut			•	•	2	9	16	22	26	33	35	35	36	36	37
9	Apuka II				•	•	2	3	6	8	10	16	24	32	38	41
10	Tilichiki				•	•	1	4	6	8	14	16	22	24	24	29
11	Topata-Olyutorskaya				•	•	6	10	15	20	27	37	39	39	44	50
12	Korf			•	•	•	2	4	8	17	18	26	30	31	41	44
12	Korf				•	•	3	4	8	17	33	50	57	77	87	93
13	Ust'-Lesnaya			•	•	1	6	11	15	18	23	24	24	25	25	26
14	Ossora			•	•	•	1	4	7	11	13	15	19	23	24	33
15	Karaga				•	•	1	6	9	16	21	23	28	32	32	48
16	Ust'-Palana				•	•	8	16	22	27	32	33	34	34	35	36
17	Karaginskiy ostrov I			•	•	•	2	7	15	20	30	38	47	55	62	69
19	Ust'-Voyampolka			•	•	•	5	10	15	18	19	19	19	20	21	21
21	Uka				•	•	3	5	10	16	20	25	32	43	50	63
23	Tigil'				•	•	10	19	25	34	35	38	38	41	43	43
24	Ozernoy, mys					•	•	2	5	8	11	13	18	27	29	36
25	Ptichiy ostrov				•	•	4	8	14	21	23	26	32	34	34	34
26	Ust'-Khayryuzovo				•	•	4	10	16	23	26	30	36	38	38	38
30	Klyuchi				•	•	4	9	17	22	33	40	51	58	68	75
32	Kozyrevskiy sovkhoz				•	•	7	16	25	34	41	52	61	65	70	71
34	Ust'-Kamchatsk				•	•	•	2	7	13	24	36	43	54	64	72
35	Afrika, mys					•	•	1	2	4	7	12	16	21	24	30
36	Kozyrevsk				•	•	3	7	12	15	19	25	27	30	33	34
38	Esso			•	•	2	7	12	16	20	26	30	35	41	46	48
40	Icha					•	1	4	12	20	28	34	46	49	50	50
40	Icha				•	•	•	4	10	16	21	24	27	27	29	30
45	Nikol'skoye (o. Beringa) I					•	•	•	2	4	7	13	18	24	35	40
46	Nikol'skoye (o. Beringa) II						•	*1*	*2*	*2*	*5*	*6*	*8*	*9*	*10*	*13*
47	Dolinovka			•	•	•	4	11	18	22	29	34	37	45	49	53
47	Dolinovka				•	•	7	18	24	28	36	41	46	56	62	66
49	Kronotskoye ozero			•	•	•	7	16	22	26	34	38	44	52	58	62
50	Preobrazhenskoye (o. Mednyy)				•	•	•	2	4	5	10	17	21	27	31	34
51	Mil'kovo, exp. agr. sta.			•	•	•	6	13	22	29	41	46	56	64	71	80
52	Mil'kovo			•	•	2	7	16	22	28	38	46	55	65	74	82
54	Storozh, bukhta					•	•	2	4	7	14	19	27	35	42	46
56	Sobolevo					•	3	10	19	30	39	42	50	65	68	68
56	Sobolevo				•	•	3	10	19	22	31	38	42	45	48	52
57	Pushchino		•		•	4	12	26	38	48	61	69	85	98	109	128
59	Semlyachiki					•	•	*1*	*4*	*6*	*10*	*13*	*14*	*19*	*20*	*22*
61	Ganaly		•		•	3	12	25	33	40	44	52	56	57	59	63
63	Kikhchik						1	7	15	28	35	42	49	54	57	60
63	Kikhchik					•	•	6	15	22	28	33	36	37	40	40
68	Yelizovo				•	•	3	3	7	10	14	20	24	26	30	33
69	Nachiki				•	2	10	24	36	46	55	61	74	83	88	95
70	Shipunskiy, mys				•	•	•	2	8	15	20	25	34	50	56	69
71	Kamchatskaya agro				•	•	5	8	16	22	27	36	49	54	61	67
73	Nachikinskoye ozero				•	4	10	26	41	49	63	73	89	99	114	120
77	Petropavlovsk, city I	•			•	•	1	4	9	22	35	43	54	63	64	68
78	Petropavlovsk, city II					•	•	3	5	8	17	24	33	34	37	42

II			III			IV			V			VI			Highest in winter			Rod location
1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	avg.	max	min	
44	46	49	51	53	55	56	57	58	52	35	15	•	•		62	105	45	Exposed
20	20	20	21	22	20	19	19	16	9	•	•				28	55	12	"
23	23	24	24	24	25	23	23	20	15	5	•				31			"
39	39	40	40	40	42	39	39	33	24	9	•	•			52			"
44	48	49	51	54	56	58	61	62	57	41	17	•			69	144	20	"
35	35	35	36	39	38	35	34	32	23	11	•				44	76	25	"
52	53	55	56	58	60	64	67	65	60	48	33	6			76	153	31	"
51	51	53	54	58	60	60	61	59	47	29	8				66	144	19	"
95	98	101	103	104	106	117	118	119	110	93	58	10	•		122	155	86	Protected
27	27	28	28	28	29	27	27	23	17	6	•				36	66	8	Exposed
41	43	44	46	48	58	66	66	62	55	38	19	•			70	146	26	Exposed
59	64	64	67	70	84	94	94	89	79	54	27	•	•		100			Protected
37	38	38	38	38	40	38	38	32	21	8	•				50			Exposed
79	90	94	94	98	102	107	106	101	90	65	24	2			111	133	91	Protected
22	22	23	23	23	24	24	24	19	11	•	•	•			31	53	12	Exposed
72	78	82	87	88	94	98	96	92	81	63	36	10	•		101	127	72	"
43	46	46	46	46	48	50	52	43	25	16	•				62			"
40	46	49	56	56	59	66	65	62	55	40	10	•			66			"
34	36	37	38	38	39	44	44	38	27	12	•				50			"
38	41	42	42	42	43	48	49	43	31	14	•				56	96	18	"
84	96	98	101	101	104	100	85	60	26	4	•	•			113	172	50	Protected
77	81	80	80	78	70	67	50	30	23	2	•				100			"
80	90	93	98	101	105	108	103	93	66	34	6	•			112	148	73	"
34	39	40	40	41	45	51	54	53	40	25	9	•			61	117	25	Exposed
36	38	37	37	36	32	26	17	5	•	•	•				46	84	22	"
50	52	52	53	53	53	51	44	29	10	•	•	•			59	91	26	"
52	55	58	62	62	66	69	66	47	20	2					75	98	58	Protected
31	31	31	32	32	31	30	22	16	7	•					37			Exposed
48	52	58	59	62	67	62	53	39	22	10	•				77	121	26	"
14	*15*	*17*	*17*	*17*	*12*	*11*	*6*	*2*	•	•	•				*20*	*35*	*6*	"
55	57	57	58	57	56	52	41	25	6	•	•				63	106	29	"
69	71	72	73	73	71	67	56	37	13	•	•				79	130	38	Protected
64	67	68	68	68	67	63	52	34	12	•	•				75			"
36	38	42	47	54	54	51	46	34	22	10	•				65	108	26	Exposed
82	88	90	91	92	92	89	80	64	39	12	•				99	149	58	"
86	91	91	92	94	94	91	82	66	35	12	•	•			101	146	68	"
55	64	65	67	74	77	73	67	51	26	9	•				86	134	41	"
68	70	70	72	74	73	70	65	54	31	10	•				82	98	48	Protected
55	56	57	59	61	62	62	53	41	22	3	•				67	91	31	Exposed
139	146	147	147	147	149	146	136	123	102	69	33	6			162	202	115	"
25	*24*	*20*	*20*	*20*	*19*	*16*	*13*	*7*	*3*	*1*	•	•			*35*	*91*	*5*	"
66	67	68	68	70	71	70	63	51	31	15	•				83	126	44	"
62	64	65	69	74	72	67	59	47	30	9	•				78	112	54	Protected
42	42	42	43	43	42	41	30	22	9	•	•				50	79	26	Exposed
40	44	43	43	41	39	31	19	8	2	•	•				52	96	25	"
105	112	113	115	121	126	127	123	116	97	68	34	8	•	•	139	257	86	"
74	77	78	79	80	94	97	95	87	65	37	7				107	151	54	"
78	78	79	79	80	84	88	84	62	34	6	•				93			"
122	130	136	138	141	146	147	146	141	128	112	65	10	•	•	162			"
76	81	83	85	86	93	80	68	49	21	5	1	•			104	171	60	Protected
50	51	48	45	42	34	20	10	2	1	•	•				57	80	33	Exposed

Station No.	Station	IX			X			XI			XII			I		
		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
79	Apacha				•	1	6	14	21	28	36	43	53	58	64	69
81	Bol'sheretskiy sovkhoz					•	•	4	12	20	26	29	34	35	38	42
83	Petropavlovsk, lighthouse I					•	1	6	12	24	33	43	55	59	61	71
84	Petropavlovsk, lighthouse II				•	•	•	3	10	12	17	20	27	29	29	30
86	Ust'-Bol'sheretsk . .					•	•	2	7	11	15	17	20	20	23	25
87	Povorotnyy, mys . .						•	5	7	11	17	23	31	36	41	47
88	Khodutka					•	•	1	6	12	20	32	44	49	51	57
89	Ozernaya I					•	•	•	4	11	19	26	31	37	40	46
90	Ozernaya II					•	•	•	2	6	10	14	17	20	22	25
91	Paushetskiye Klyuchi .					•	•	8	23	37	54	72	88	93	99	111
92	Lopatka, mys						•	•	2	7	14	20	25	31	34	39

II			III			IV			V			VI			Highest in winter			Rod location
1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	avg.	max	min	
74	77	80	80	82	84	87	80	69	46	20	4				92	113	61	Exposed
43	43	46	47	50	46	46	38	24	9	•	•				58			•
76	82	88	98	105	114	120	113	98	78	51	20	•			130	248	92	Protected
40	38	37	35	34	34	34	32	26	16	8	2				58	117	26	Exposed
27	27	30	30	32	32	32	26	17	7	•	•				38	89	12	•
47	50	51	52	54	57	63	61	51	36	18	3				72	114	47	•
58	62	62	65	65	75	81	77	65	40	15	2	•	•		83	125	56	•
48	52	52	52	51	47	43	29	14	•	•					61	109	36	•
26	28	28	28	28	25	23	16	8	•	•					33			•
112	116	117	117	126	144	139	125	96	82	41	20	4			153	209	115	•
44	52	56	61	64	72	75	75	65	45	23	7	•			82	161	30	•

TABLE 2
DEPTH OF SNOW COVER ACCORDING TO SNOW SURVEYS ON THE LAST DAY OF THE TEN-DAY PERIOD (cm)

Section	IX			X			XI			XII			I			II			III			IV			V			VI			Highest in winter		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	avg.	max	min
1. Verkhne-Penzhino																																	
Field			•	10	18	24	27	33	38	42	47	53	57	62	63	61	61	62	64	66	67	67	66	59	43	•						74	103	53
2. Slautnoye																																	
Field			•	10	16	17	20	22	24	24	25	26	26	26	26	26	26	27	27	27	27	25	18	•	•							36	67	21
4. Kamenskoye																																	
Field			•	12	20	23	24	25	27	27	28	28	29	29	31	31	32	32	33	33	33	31	25	11	•						42	65	26
7. Chemurnaut																																	
Field			•	•	18	26	28	32	33	35	39	40	44	45	48	46	51	54	56	61	59	59	56	47	13	•					70	91	44
8, 9. Apuka I, II																																	
Field				•	•	6	8	11	15	18	19	22	25	25	27	29	30	30	31	31	31	30	29	21	14	•					41	71	20
11. Topata-Olyutorskaya																																	
Field			•	•	8	14	20	23	27	33	37	37	40	45	50	53	55	56	57	58	54	52	51	47	37	19	•				73	133	31
12. Korf																																	
Field			•	•	•	7	10	12	18	24	26	31	36	41	46	46	49	53	56	56	57	54	50	42	24	•					64	113	42
13. Ust'-Lesnaya																																	
Field				•	10	14	20	24	26	27	27	28	28	29	30	30	31	31	31	32	33	29	24	12	•						42	71	18
14, 15. Ossora, Karaga																																	
Field					•	18	23	31	35	41	46	50	53	57	62	65	67	71	71	74	76	76	76	64	44	10	•				87	138	47
19. Ust-Voyampolka																																	
Field				•	12	22	25	28	29	30	31	31	32	32	33	33	34	34	36	36	37	36	26	13	•						44	71	18
21. Uka																																	
Field					•	7	17	22	29	35	47	58	66	77	86	90	95	103	107	113	114	116	105	92	79	49	12	•			125	174	76
23. Tigil'																																	
Field			•	•	14	23	27	31	34	37	38	40	42	44	45	42	44	45	45	45	43	36	24	•							51	76	22
26. Ust'-Khayryuzovo																																	
Field				•	9	16	23	25	29	34	36	37	37	38	40	38	40	42	42	43	43	40	34	20	•						52	76	26
30. Klyuchi																																	
Field			•	•	•	10	16	21	28	38	48	54	63	68	77	82	80	83	85	84	78	68	43	16	•						98	165	39
32. Kozyrevskiy sovkhoz																																	
Glade in woods				•	11	23	27	32	43	53	65	70	75	79	86	93	97	97	97	94	91	86	73	44	•						106	153	69
34. Ust'-Kamchatsk																																	
Field					•	•	9	16	24	31	39	44	53	57	63	70	70	75	78	82	84	81	72	46	17	•					88	131	44
35. Afrika, mys																																	
Field						•	•	8	13	19	20	21	28	38	46	51	45	52	53	62	62	63	58	43	22	•					75	108	41
36. Kozyrevsk																																	
Field			•	•	•	14	19	21	30	37	44	46	49	52	58	58	56	59	58	57	50	38	20	•	•						71	112	40
In woods under trees		•	•	•	11	26	28	32	36	50	62	64	75	76	78	84	81	84	86	81	73	60	41	17	•						95	126	65
38. Esso																																	
Field				•	10	16	21	25	30	31	40	44	48	50	53	56	55	58	58	56	54	44	30	13	•						65	99	39

Section	IX			X			XI			XII			I			II			III			IV			V			VI			Highest in winter		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	avg.	max	min
45, 46. Nikol'skoye (o. Beringa) I, II																																	
Field							•	•	10	19	21	26	31	38	42	45	48	48	49	51	54	50	35	27	15	•					60	103	20
47. Dolinovka																																	
Field			•	•	•	16	18	27	32	37	41	47	54	54	60	62	62	64	63	61	55	42	21	•							72	111	35
Glade in woods				•	10	22	24	29	35	42	45	55	61	61	66	67	66	66	69	65	60	55	22	•							73	110	38
49. Kronotskoye ozero																																	
In woods under trees		•	•	•	12	18	31	35	39	48	54	62	67	70	72	74	73	75	73	71	66	58	33	•	•						82	110	11
51. Mil'kovo, experimental agricultural station																																	
Field		•	•	7	20	30	35	46	53	64	70	80	87	91	97	98	98	99	98	96	84	61	25	9							107	151	70
52. Mil'kovo																																	
Field		•	•	10	20	26	34	44	50	61	68	75	84	88	93	92	94	96	94	90	75	51	17	•							103	142	68
In woods under trees		•	•	13	25	32	40	48	56	69	76	86	96	99	105	104	103	107	104	98	85	69	31	11	•						117	155	87
54. Storozh, bukhta																																	
Field					•	11	14	26	37	44	49	57	62	78	85	79	88	90	90	89	79	51	27		13	•					107	142	76
In woods under trees				•	•	13	18	36	51	57	60	70	79	91	95	91	100	107	102	100	89	67	25		10	•					120	159	78
56. Sobolevo																																	
Field			•	•	22	31	34	41	46	49	54	57	59	62	62	63	65	67	67	65	58	46	23	6							73	105	46
In woods under trees			•	10	26	35	40	49	56	60	65	67	74	75	74	78	80	83	83	82	73	55	35	9							90	116	59
57. Pushchino																																	
Glade in woods			6	14	29	42	54	67	78	95	103	120	137	145	148	146	150	152	153	147	139	128	107	74	28	•					167	205	114
59. Semlyachiki																																	
Glade in woods				•	•	19	23	36	42	49	60	66	72	83	93	88	94	104	110	109	104	102	77	47	8	•					129	181	52
61. Ganaly																																	
Glade in woods			•	22	37	42	48	54	60	64	66	66	66	67	68	67	66	69	68	66	59	49	24	•	•						85	115	59
In woods under trees			•	22	38	45	51	58	69	76	81	86	93	93	96	97	98	101	100	94	89	77	50	20	•						115	172	77
63. Kikhchik																																	
Field				•	10	22	26	32	36	37	41	42	44	45	46	47	48	50	51	50	41	28	9								62	78	42
68. Yelizovo																																	
Field				•	6	10	12	18	21	25	26	28	34	38	40	42	38	41	37	32	22	•	•								53	120	29
69. Nachiki																																	
Field		•	•	16	36	43	56	66	71	88	95	105	118	124	131	130	138	142	150	150	145	136	114	81	41	6					166	218	94
70. Shipunskiy, mys																																	
Field					•	•	27	45	50	53	56	60	65	66	67	70	66	76	79	82	81	72	53	18	•							95	114	69
73. Nachikinskoye ozero																																	
Field			•	20	37	50	54	62	71	86	95	100	118	131	141	147	154	162	164	162	102	151	131	112	58	18	•				176	220	112
In woods under trees			•	11	40	52	58	75	88	107	116	131	148	171	180	182	190	190	192	187	181	173	156	125	83	24	•	•			207	244	143
78. Petropavlovsk, city II																																	
Field					•	•	17	27	39	48	60	61	66	72	78	78	82	82	86	71	62	51	27	13	•	•					100	152	75

Section	IX			X			XI			XII			I			II			III			IV			V			VI			Highest in winter		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	avg.	max	min
79. Apacha																																	
Field			•	•	25	31	39	43	48	51	55	56	61	61	64	65	64	68	69	67	59	49	23	•							77	95	42
81. Bol'sheretskiy sovkhoz																																	
Field				•	12	20	28	36	39	43	15	18	54	56	57	57	55	55	58	52	44	28	15	•							65	89	34
84. Petropavlovsk, lighthoues II																																	
Field				•	•	18	19	24	27	32	31	35	39	40	40	40	41	43	44	39	38	27	14	6	•						60	109	33
86. Ust'-Bol'sheretsk																																	
Field					•	•	12	25	27	28	33	35	37	38	42	43	44	46	44	42	29	8									54	83	31
88. Khodutka																																	
In woods under trees					•	15	21	41	60	78	85	97	117	121	132	128	139	143	162	162	156	138	103	57	19							178	245	129
89, 90. Ozernaya I, II																																	
Field				•	•	8	13	21	27	32	36	43	46	48	50	54	52	52	49	45	43	20	•								64	117	34
90. Lopatka, mys																																	
Field					•	•	11	18	21	22	27	30	34	36	36	35	44	49	51	49	47	36	25	•	•							64	145	22

TABLE 3
DENSITY OF SNOW COVER ACCORDING TO SNOW SURVEY ON THE LAST DAY OF THE TEN-DAY PERIOD (g/cm³)

Section	IX			X			XI			XII			I			II			III			IV			V			VI			Average density at greatest ten-day Depth
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3		
1. Verkhne-Penzhino																																
Field	•	0.15	0.11	0.15	0.15	0.15	0.16	0.18	0.18	0.19	0.20	0.20	0.20	0.21	0.21	0.21	0.21	0.21	0.21	0.22	0.23	0.23	0.24	0.26								0.21
2. Slautnoye																																
Field	•	0.16	0.16	0.16	0.20	0.20	0.20	0.20	0.21	0.21	0.21	0.21	0.21	0.22	0.22	0.22	0.22	0.22	0.24	0.26	0.26	0.28	•	•								0.20
4. Kamenskoye																																
Field	•	0.14	0.15	0.18	0.18	0.19	0.20	0.20	0.20	0.21	0.21	0.22	0.22	0.22	0.22	0.22	0.23	0.24	0.24	0.26	0.28	0.33	•									0.22
7. Chemurnaut																																
Field		•	0.17	0.20	0.26	0.28	0.28	0.29	0.29	0.29	0.29	0.29	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.33	0.37	0.39	•								0.32
11. Topata-Olyutorskaya																																
Field		•	*0.26*	*0.26*	*0.29*	*0.29*	*0.32*	*0.35*	*0.35*	*0.35*	*0.36*	*0.36*	*0.37*	*0.39*	*0.39*	*0.39*	*0.39*	*0.39*	*0.39*	*0.40*	*0.41*	*0.44*	*0.44*	*0.49*	•							0.34
12. Korf																																
Field			•	0.24	0.27	0.28	0.28	0.28	0.28	0.30	0.30	0.31	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.33	0.33	0.33	0.34	0.37	0.37	•							0.32
13. Ust'-Lesnaya																																
Field			•	0.18	0.23	0.24	0.25	0.26	0.27	0.29	0.29	0.30	0.30	0.31	0.31	0.31	0.31	0.31	0.32	0.32	0.33	0.35	0.35	•									0.29
14, 15. Ossora																																
Field			•	0.19	0.20	0.23	0.23	0.23	0.23	0.25	0.25	0.26	0.26	0.26	0.26	0.29	0.29	0.30	0.30	0.30	0.31	0.33	0.33	0.36	0.38	0.47	•							0.30
19. Ust'-Voyampolka																																
Field			•	0.18	0.19	0.21	0.23	0.24	0.25	0.26	0.26	0.27	0.27	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.29	0.30	0.31	0.34	•								0.27
21. Uka																																
Field			•	0.25	0.25	0.25	0.25	0.28	0.28	0.28	0.30	0.31	0.31	0.33	0.33	0.33	0.33	0.33	0.33	0.36	0.37	0.39	0.40	0.43	0.43	0.45	•						0.33
23. Tigil																																
Field	•	•		0.14	0.16	0.16	0.16	0.18	0.18	0.20	0.20	0.22	0.22	0.22	0.23	0.23	0.23	0.24	0.24	0.25	0.27	0.29	•										0.22
26. Ust'-Khayryuzovo																																
Field			•	0.14	0.21	0.23	0.24	0.26	0.26	0.27	0.27	0.28	0.28	0.29	0.29	0.30	0.31	0.31	0.32	0.32	0.35	0.36	0.36	•									0.32
30. Klyuchi																																
Field			•	•	0.21	0.22	0.22	0.22	0.23	0.23	0.24	0.24	0.25	0.25	0.27	0.28	0.29	0.30	0.31	0.32	0.34	0.35	0.35										0.27
32. Kozyrevskiy sovkhoz																																
Glade in woods			•	0.17	0.18	0.20	0.20	0.20	0.20	0.22	0.25	0.25	0.25	0.25	0.26	0.27	0.27	0.27	0.27	0.27	0.28	0.31	0.32	•									0.25
34. Ust'-Kamchatsk																																
Field				•	•	0.23	0.24	0.24	0.24	0.26	0.28	0.29	0.29	0.29	0.30	0.31	0.32	0.32	0.34	0.34	0.35	0.39	0.40	0.44	•									0.33
35. Afrika, mys																																
Field				•	•	0.20	0.24	0.24	0.26	0.28	0.28	0.30	0.30	0.31	0.33	0.33	0.33	0.33	0.33	0.36	0.38	0.42	0.46	•									0.33
36. Kozyrevsk																																
Field			•	•	0.17	0.17	0.18	0.18	0.19	0.19	0.20	0.20	0.22	0.22	0.24	0.24	0.25	0.25	0.27	0.28	0.32	0.35	•										0.24
In woods under trees			•	0.15	0.15	0.16	0.16	0.18	0.18	0.18	0.19	0.19	0.20	0.21	0.22	0.23	0.23	0.24	0.26	0.26	0.28	0.31	0.33										0.20
38. Esso																																
Field			•	0.12	0.14	0.15	0.16	0.16	0.18	0.18	0.18	0.19	0.19	0.20	0.20	0.21	0.22	0.22	0.22	0.23	0.25	0.25	0.26	28	•								0.20
45, 46. Nikol'skoye (o. Beringa) I, II																																
Field				•	•	0.22	0.22	0.24	0.30	0.30	0.31	0.33	0.33	0.34	0.35	0.36	0.36	0.36	0.36	0.36	0.38	0.40	0.43	0.43	•									0.35

Section	IX			X			XI			XII			I			II			III			IV			V			VI			Average density at greatest ten-day Depth
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
47. Dolinovka																																		
Field	•	•	•	0.16	0.16	0.16	0.16	0.17	0.17	0.18	0.18	0.19	0.19	0.20	0.21	0.21	0.22	0.21	0.25	0.26	0.32	•										0.19
Glade in woods				•	0.11	0.15	0.15	0.15	0.15	0.16	0.16	0.17	0.17	0.19	0.19	0.19	0.19	0.20	0.21	0.22	0.24	0.25	0.30	•										0.20
49. Kronotskoye ozero																																		
In woods under trees				•	•	0.16	0.16	0.16	0.16	0.18	0.19	0.19	0.19	0.20	0.22	0.23	0.23	0.23	0.24	0.24	0.26	0.26	0.30	•										0.21
51. Mil'kovo, experimental agricultural station																																		
Field				•	0.14	0.14	0.14	0.15	0.16	0.19	0.19	0.20	0.21	0.21	0.21	0.22	0.23	0.21	0.25	0.25	0.26	0.28	0.32	0.33	0.33										0.23
52. Mil'kovo																																		
Field	•	•		0.16	0.16	0.17	0.17	0.17	0.18	0.18	0.19	0.20	0.21	0.22	0.23	0.24	0.24	0.24	0.26	0.26	0.31	0.33	0.36	•										0.22
In woods under trees	•	•		0.16	0.16	0.16	0.16	0.16	0.18	0.18	0.19	0.20	0.20	0.21	0.22	0.23	0.24	0.24	0.26	0.28	0.31	0.32	0.32	0.31										0.22
54. Storozh, bukhta																																		
Field				•	•	0.18	0.24	0.24	0.25	0.25	0.25	0.26	0.27	0.28	0.29	0.30	0.30	0.31	0.31	0.35	0.39	0.39	0.41	0.41	•									0.31
In woods under trees				•	0.16	0.19	0.19	0.22	0.22	0.24	0.24	0.25	0.25	0.27	0.28	0.28	0.28	0.28	0.31	0.34	0.35	0.35	0.36	•										0.27
56. Sobolevo																																		
Field				•	•	0.17	0.19	0.22	0.22	0.23	0.24	0.24	0.25	0.27	0.27	0.27	0.27	0.28	0.28	0.29	0.29	0.32	0.32	0.35	0.38										0.26
In woods under trees				•	0.16	0.16	0.19	0.20	0.21	0.23	0.24	0.24	0.25	0.26	0.26	0.26	0.26	0.26	0.26	0.27	0.27	0.31	0.32	0.34	0.37										0.26
57. Pushchino																																		
Glade in woods				0.17	0.18	0.18	0.18	0.19	0.19	0.20	0.20	0.23	0.23	0.23	0.24	0.25	0.26	0.26	0.26	0.28	0.28	0.29	0.29	0.30	0.33	0.34	0.34	•						0.23
59. Semlyachiki																																		
Glade in woods				•	•	0.19	0.23	0.25	0.29	0.30	0.30	0.31	0.32	0.32	0.32	0.33	0.34	0.34	0.36	0.36	0.39	0.39	0.44	0.45	0.52										0.35
61. Ganaly																																		
Glade in woods				•	0.16	0.17	0.18	0.19	0.20	0.21	0.23	0.23	0.23	0.23	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.25	0.27	0.34	•										0.22
In woods under trees				•	0.15	0.17	0.18	0.18	0.20	0.21	0.23	0.23	0.23	0.23	0.24	0.24	0.24	0.24	0.24	0.24	0.25	0.26	0.28	0.32	0.32	•										0.28
63. Kikhchik																																		
Field				•	0.15	0.19	0.19	0.22	0.23	0.25	0.25	0.27	0.27	0.28	0.28	0.29	0.29	0.29	0.30	0.30	0.32	0.33	0.35												0.29
68. Yelizovo																																		
Field				•	0.18	0.18	0.18	0.18	0.18	0.22	0.22	0.23	0.23	0.23	0.23	0.24	0.25	0.26	0.28	0.29	0.33	•	•												0.23
69. Nachiki																																		
Field	•	•		0.19	0.19	0.22	0.22	0.22	0.24	0.24	0.24	0.25	0.26	0.26	0.28	0.28	0.28	0.29	0.30	0.30	0.31	0.32	0.35	0.38	0.40	0.44	0.44							0.28
70. Shipunskiy, mys																																		
Field				•	•	0.20	0.23	0.26	0.30	0.30	0.32	0.32	0.32	0.33	0.33	0.33	0.34	0.35	0.36	0.36	0.37	0.39	0.40											0.35
73. Nachikinskoye ozero																																		
Field				•	0.18	0.19	0.19	0.21	0.22	0.23	0.26	0.26	0.29	0.29	0.29	0.30	0.32	0.32	0.32	0.34	0.34	0.34	0.36	0.38	0.43	0.44	0.44							0.31
78. Petropavlovsk, city II																																		
Field				•	•	0.23	0.25	0.26	0.27	0.30	0.30	0.30	0.31	0.32	0.33	0.34	0.34	0.34	0.35	0.37	0.39	0.39	0.43	•	•										0.31
79. Apacha																																		
Field				•	•	0.17	0.18	0.20	0.22	0.23	0.26	0.27	0.27	0.28	0.28	0.30	0.30	0.31	0.31	0.31	0.32	0.33	0.35	0.38	•										0.29
81. Bol'sheretskiy sovkhoz																																		
Field						0.17	0.21	0.21	0.22	0.22	0.25	0.25	0.25	0.25	0.27	0.29	0.30	0.31	0.31	0.32	0.33	0.34	0.35	0.35	•										0.29

Section	IX			X			XI			XII			I			II			III			IV			V			VI			Average density at greatest ten-day Depth
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
84. Petropavlovsk, lighthouse II																															
Field	•	•	0.21	0.23	0.25	0.27	0.28	0.28	0.28	0.28	0.29	0.30	0.30	0.30	0.31	0.31	0.32	0.33	0.35	0.37	0.38	0.42	•								0.27
86. Ust'-Bol'sheretsk																															
Field			0.16	0.24	0.24	0.24	0.25	0.26	0.27	0.28	0.30	0.30	0.31	0.31	0.31	0.34	0.34	0.37													0.31
88. Khodutka																															
In field under trees		•	0.17	0.17	0.20	0.21	0.22	0.23	0.23	0.25	0.26	0.27	0.30	0.30	0.30	0.30	0.30	0.31	0.35	0.37	0.38	0.38	0.39								0.31
89, 90. Ozernaya I, II																															
Field	•	•	0.19	0.21	0.25	0.25	0.26	0.28	0.31	0.32	0.34	0.34	0.34	0.35	0.35	0.37	0.38	0.38	0.38												0.36
92. Lopaka, mys																															
Field		•	•	0.24	0.26	0.28	0.28	0.30	0.31	0.33	0.33	0.33	0.33	0.33	0.33	0.34	0.38	0.38	0.39	0.41	•											0.33

TABLE 4
ACCUMULATION OF WATER IN SNOW COVER ACCORDING TO SNOW SURVEYS ON THE LAST DAY OF THE TEN-DAY PERIOD (mm)

Section	IX			X			XI			XII			I			II			III			IV			V			VI			Average density at greatest ten-day Depth
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
1. Verkhne-Penzhino																															
Field				•	17	23	36	42	55	61	80	81	94	104	114	115	116	124	129	130	132	134	110	136	118	104	•				154
2. Slautnoye																															
Field				•	17	28	31	38	44	47	47	48	51	52	52	52	56	56	56	58	61	75	78	57	•	•					89
4. Kamenskoye																															
Field				•	19	34	43	43	44	51	52	52	59	62	63	66	68	70	72	77	82	81	80	67	36	•					102
7. Chemurnaut																															
Field					•	25	46	56	82	86	89	110	125	149	149	162	165	180	185	194	207	191	181	178	152	61	•				221
11. Topata-Olyutorskaya																															
Field					•	*18*	*37*	*57*	*66*	*85*	*100*	*102*	*112*	*149*	*152*	*195*	*206*	*210*	*210*	*214*	*212*	*188*	*187*	*182*	*178*	*172*	*119*	•			*257*
12. Korf																															
Field					•	16	28	33	54	68	71	106	115	132	135	151	158	162	175	197	189	181	174	157	88	•					215
13. Ust'-Lesnaya																															
Field					•	20	35	49	67	71	76	79	86	86	91	100	100	103	104	106	115	92	86	80	45	•					129
14, 15. Ossora, Karaga																															
Field					•	30	45	66	73	90	102	126	137	150	177	192	196	212	223	233	258	262	272	229	183	41	•				297
19. Ust'-Voyampolka																															
Field					•	27	43	56	69	76	81	82	83	90	92	94	97	99	106	109	112	115	113	91	46	•					132
21. Uka																															
Field					•	27	47	57	75	100	137	154	201	250	273	302	313	336	351	390	405	416	399	371	319	203	50	•			449
23. Tigil'																															
Field			•	•	20	37	43	54	63	69	76	84	97	97	97	97	100	102	108	110	105	96	68	•							122
26. Ust-Khayryuzovo																															
Field					•	18	34	57	68	75	95	107	116	116	118	120	120	123	133	144	147	151	144	129	54	•					174
30. Klyuchi																															
Field					•	•	17	30	45	58	83	111	126	145	182	189	224	228	233	262	263	259	220	167	56						289
32. Kozyrevskiy sovkhoz																															
Glade in woods					•	17	45	64	80	100	137	159	182	196	215	236	251	257	271	273	281	262	255	221	161	•					321
34. Ust'-Kamchatsk																															
Field					•	•	23	43	59	73	102	121	149	168	192	221	229	250	263	291	294	299	312	206	97	•					322
35. Afrika, mys																															
Field						•	•	16	31	48	52	71	80	118	147	157	173	193	200	216	223	227	246	175	74	•					279
36. Kozyrevsk																															
Field					•	•	25	36	45	52	70	81	91	98	109	117	126	127	130	133	140	125	101	62	•						161
In woods under trees					•	19	37	47	52	66	88	108	124	141	152	167	187	190	198	206	195	188	173	127	59						223
38. Esso																															
Field					•	16	21	32	43	49	61	70	83	95	99	110	123	128	129	130	132	131	119	80	39	•					143

Section	IX			X			XI			XII			I			II			III			IV			V			VI			Average density at greatest ten-day Depth
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
45, 46. Nikol'skoye (o. Beringa) I, II																															
Field							•	•	23	32	45	85	102	110	123	137	151	152	154	156	158	143	81	73	53	•					230
47. Dolinovka																															
Field			•	•	•	31	38	42	47	58	62	86	100	105	118	129	130	135	145	144	140	100	60	•							157
Glade in woods				•	20	36	42	51	54	62	63	90	103	117	124	131	135	137	151	148	146	106	62	•							164
49. Kronotskoye ozero																															
In woods under trees				•	•	21	30	50	60	63	90	108	118	135	149	160	179	193	180	180	179	176	153	99	•						202
51. Mil'kovo, experimental agricultural station																															
Field				•	11	26	48	58	82	102	120	148	176	191	207	222	233	241	250	253	258	238	194	105	32						274
52. Mil'kovo																															
Field			•	•	19	34	45	58	73	82	106	125	153	182	195	215	222	228	237	245	256	223	158	62	•						265
In woods under trees			•	•	22	39	53	65	80	92	123	141	168	195	208	233	241	250	262	268	275	262	219	105	38						292
54. Storozh, bukhta																															
Field						•	19	42	54	84	109	143	173	188	235	278	279	295	322	327	330	338	272	169	85	•						377
In woods under trees						•	25	43	70	100	137	151	180	215	233	254	266	302	316	338	335	318	270	115	45	•						351
56. Sobolevo																															
Field			•	•		36	61	78	93	111	125	133	147	162	170	174	175	182	192	197	194	185	152	88	22						218
In woods under trees			•	17		40	68	81	103	128	138	159	174	198	200	202	214	216	222	236	230	223	179	126	33						263
57. Pusuchino																															
Glade in woods		8		24		49	74	100	127	157	195	233	276	308	344	374	386	397	434	439	415	386	365	315	257	91	•				463
59. Semlyachiki																															
Glade in woods					•	•	33	41	75	113	132	157	204	235	269	274	301	312	312	391	366	344	314	269	128	25					402
61. Ganaly																															
Glade in woods			•		18	66	79	94	113	135	149	156	161	161	161	162	162	164	168	171	167	150	135	78	•						196
In woods under trees			•		32	69	80	97	115	154	172	175	192	220	228	232	241	243	248	245	237	232	212	154	46	•					279
63. Khikhchik																															
Field					•	18	41	52	73	87	87	104	118	124	125	130	131	147	154	156	165	138	104	35							181
68. Yelizovo																															
Field					•	11	15	20	30	37	53	55	64	74	85	89	90	98	102	101	91	67	•	•							117
69. Nachiki																															
Field			•	•	33	67	88	115	151	176	209	230	268	316	333	367	383	399	430	465	480	492	490	434	317	168	16				525
70. Shipunskiy, mys																															
Field						•	•	55	105	136	152	155	189	204	210	222	242	244	261	279	292	295	256	190	74						317
73. Nachikinskoye ozero																															
Field				•	54	78	106	120	148	175	219	218	291	344	379	427	459	493	531	547	575	545	531	518	450	298	18				595
78. Petropavlovsk, city II																															
Field					•	•	37	64	99	132	184	191	203	232	246	263	269	277	289	246	234	196	84	62	•	•					211
79. Apacha																															
Field				•	•	42	59	78	100	111	140	144	154	181	183	193	197	200	212	215	217	200	172	89	•						243

Section	IX			X			XI			XII			I			II			III			IV			V			VI			Average density at greatest ten-day Depth
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
81. Bol'sheretskiy sovkhoz																															
Field							21	46	56	87	98	108	109	127	150	155	158	161	162	163	185	169	145	96	48	•					199
84. Petropavlovsk, lighthouse II																															
Field						•	•	25	44	62	76	92	98	103	120	120	126	130	131	136	138	138	161	111	59	22	•				187
86. Ust'-Bol'sheretsk																															
Field									15	58	62	66	78	94	99	104	122	123	129	135	136	150	116	31							162
88. Khodutka																															
In woods under trees							•	25	36	86	127	172	200	219	288	289	349	372	394	400	464	521	554	521	374	215	73				585
89, 90. Ozernaya I, II																															
Field						•	•	17	30	53	71	73	82	105	121	131	139	146	146	160	152	147	142	68							203
92. Lopatka, mys																															
Field							•	•	23	44	60	60	70	88	104	106	113	118	135	144	147	160	125	76	42	•					197

TABLE 5
FREQUENCY OF DIFFERENT DEPTHS OF SNOW COVER BY TEN-DAY PERIODS ACCORDING TO PERMANENT ROD

Depth (cm)	VIII	IX			X			XI			XII			I			II			III			IV			V			VI		
	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
1. Verkhne-Penzhino																															
0	100	95	95	95	47	18	5																					6	69	94	100
1—5		5	5	5	53	30	29	11	6																			12	6	6	
6—10						47	24	17	6	6																	6	6	6			
11—20						5	24	38	22	17	24	18	6	6	6	6												19	19			
21—30							18	17	44	28	35	6	18	11	18		6	6	6							6	12	19				
31—50								17	22	43	35	58	65	48	23	41	41	41	35	41	35	29	25	25	19	25	44	32				
51—75										6	6	18	11	35	47	29	29	35	41	35	41	47	50	50	56	57	32	6				
76—100															6	24	18	18	18	24	24	24	25	25	19	12	6					
101—125																	6								6							
9. Apuka II																															
0					100	80	40	38	13	13	7																23	70	100			
1—5						20	53	44	44	27	26	20		7													23	18				
6—10							7	12	31	33	40	27	27	13	19	12				6	6	6					6	12				
11—20								6	6	20	13	27	27	13	6	18	23	18	12	6	6	6	12	6	6	6	34	12				
21—30									6	7	7	6	20	20	12	12	18	23	23	6	6	6			6	12	18					
31—50											7	20	20	33	31	29	23	23	23	35	41	35	41	35	35	29	12	30				
51—75													6	7	19	23	18	18	29	29	23	23	23	35	29	29	18	6				
76—100														7	13	6	18	12	6	12	12	18	18	12	6	12	18					
101—125																									6	12						
126—150																		6	6	6	6	6	6	6	6							
13. Ust'-Lesnaya																															
0				100	92	35		8	4														4		9	39	48	87	100		
1—5					4	65	50	23	19	16	4	8	8	8	12	8		4	8	13	17	13	9	4	22	4	17	4				
6—10					4		31	23	23	16	21	12	12	16	8	8	17	17	13	8	8	8		26		9	4	9				
11—20							19	31	23	32	17	17	23	20	17	21	21	12	17	12	8	17	31	9	17	9	22					
21—30								11	23	20	33	17	15	16	17	17	21	17	12	17	21	21	13	13	13	9	9					
31—50								4	8	16	17	38	34	32	42	42	33	46	46	42	33	33	30	35	30	26						
51—75											8	8	8	8	4	4	8	4	4	8	13	8	13	13	9	4						
17. Karaginskiy ostrov I																															
0						100	72	25	7																			12	75	100		
1—5							14	31	12	6																	6	19	13			
6—10							7	25	12	18	6																		6			
11—20							7	7	38	35	29	18	12															19	6			
21—30								12	19	31	24	23	12	12	19	6											6	19				
31—50									12	6	29	41	29	13		13										6	13	19				
51—75										6	12	12	41	63	56	44	47	12	12	6	6				6	19	38	12				
76—100												6	6	12	25	31	41	65	59	75	59	59	35	35	47	44	31					
101—125																6	12	23	23	6	23	29	53	47	47	25	6					
126—150																			6	13	12	12	12	18		6						
19. Ust'-Voyampolka																															
0				100	84	67	14	10																3	7	29	60	96	100		
1—5					16	23	52	18	6	3	3		6	3		3		4	4	3	7	7		13	25	36	18	4				
6—10						7	21	31	26	26	19	23	19	23	13	7	14	14	10	7	14	10	20	7	7		4					
11—20						3	10	31	42	32	29	26	30	27	41	46	31	24	28	28	21	21	27	27	25	18	14					
21—30							3	7	20	26	36	32	26	30	30	33	38	41	41	45	38	41	17	20	7	-	4					
31—50								3	6	10	10	19	19	17	13	17	17	17	17	14	17	21	33	24	29	18						
51—75										3	3				3					3	3		3	6								
21. Uka																															
0					100	80	30																						19	94	100
1—5						20	55	65	35	10																6	6	12	31			
6—10							10	25	30	20	25																			6		
11—20							5	10	25	45	25	25	15															6	38			
21—30									5	15	35	35	45	28	5												6	17	6			

Depth (cm)	VIII	IX			X			XI			XII			I			II			III			IV			V			VI		
	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
31–50									5	10	15	20	35	50	56	28	6	6	6						6	6	12	47	6		
51–75													5	22	34	55	66	50	39	33	28	17	11	6	6	33	47	12			
76–100															5	17	22	22	39	39	39	39	45	41	50	33	17	6			
101–125																	6	22	10	28	33	44	41	50	32	22	12				
126–150																			6						6						
26. Ust'-Khayryuzovo																															
0				100	94	75	26	10																	10	24	52	75	100		
1–5					6	25	32	26	16	7	3	3	7		4	4	4	4					4	7	4	10	4	17			
6–10							26	16	16	19	29	16	3	7	7	7	7	7	7	4	4	7		3	7	7	10	4			
11–20							16	42	32	16		19	17	21	18	18	11	11	18	18	14	7	10	7	10	4	7	4			
21–30								6	29	29	23	3	7	11	11	7	18	11	11	18	21	25	24	10	10	4	7				
31–50									7	29	42	49	42	36	36	39	32	32	25	22	25	21	14	28	10	17	10				
51–75											3	10	24	18	14	14	21	25	29	30	25	29	31	28	35	27	10				
76–100														7	11	11	7	10	10	8	11	11	17	17	14	7					
30. Klyuchi																															
0				100	91	65	44	24	3		3														3	13	47	90	93	100	
1–5					6	29	35	20	29	15															3	24	37	10	7		
6–10					3	3	9	18	15	15	9	3													3	13	3				
11–20						6	6	29	26	32	18	18	3	6	6										3	13	3				
21–30							3	3	6	9	20	12	21	6	6	6	10	10	7	3	3		3	7	7	3	7				
31–50							3	6	12	23	32	43	21	26	16	19	10	3	3	7	7	7	7	7	31	17	3				
51–75									9	6	15	21	37	41	31	31	29	16	14	17	7	13	20	36	17						
76–100											3	3	12	13	28	22	19	32	34	28	40	33	27	17	13	17					
101–125													3	3	10	9	16	13	14	17	17	17	13	13	10						
126–150													3	3	3	13	16	20	21	17	13	17	23	20	10						
151–200																		6	7	11	13	13	7								
34. Ust'-Kamchatsk																															
0					100	97	70	48	15	12	3															21	50	100				
1–5						3	21	46	52	21	12														11	4	21					
6–10							6		12	28	9	15	6	3												4	14					
11–20								3	15	12	28	15	22	6	6										4	10	4					
21–30								3	3	12	15	18	3	13	3	6									3	7	7	11				
31–50									3	12	27	25	25	23	29	10	10	3							7	7	25				
51–75										3	6	21	35	39	29	36	35	24	17	14	14	11	7	11	11	28	25	4			
76–100												6	9	13	23	45	45	46	52	47	36	29	29	32	29	28					
101–125														3	10	3	7	21	28	32	39	46	43	46	39	11	4				
126–150																	3	6	3	7	11	14	21	11	11	4					
35. Afrika, mys																															
0						100	92	64	36	21	8															9	17	48	87	100		
1–5							4	36	52	50	38	25	13	9	4	9				4	4	4					9	22	9			
6–10							4		12	21	29	29	26	14	13	4	9	8	12	4	12	8			4		13	9	4		
11–20										8	21	25	26	27	26	26	31	21	17	24	16	4	8	8	8	4	13	4			
21–30											4	21	35	32	39	22	13	8	25	12		8	8	13	4	23	13	9			
31–50														18	9	26	35	30	21	32	36	36	44	33	42	32	22	4			
51–75															9	9	4	21	12	8	20	28	28	25	21	23	4	4			
76–100																4	4	8	13	16	8	8	8	21	21	9	9				
101–125																	4	4			4	4	4								
36. Kozyrevsk																															
0					100	96	81	46	11															4	36	78	89	100				
1–5					4	15	35	41	37	4	4												14	25	39	14	11				
6–10						4	11	19	18	41	18	7	7	7		4	4					4	4	21	7	4					
11–20							8	22	26	26	37	30	25	22	15	15	15	11	11	11	11	25	18	18	10	4					
21–30								4	15	22	30	37	29	30	35	31	19	30	33	35	39	25	29	18	4						
31–50									4	7	11	22	32	33	38	31	35	40	37	32	32	36	25	18	4						
51–75												4	7	4	12	19	27	15	15	18	18	10	10	4							
76–100														4				4	4	4											

Depth (cm)	VIII	IX			X			XI			XII			I			II			III			IV			V			VI		
	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
38. Esso																															
0			100		61	33	12	4																	4		28	76	80	100		
1—5					35	55	29	8	8																16		20	21	20			
6—10					4	8	38	38	12	12			1										4	4	4		16					
11—20						4	21	33	55	46	38	13	4												4		12					
21—30								17	17	25	25	50	21	17	13	9	8	4	4	4	4	4	4	4	8		12					
31—50									8	17	37	33	63	57	57	52	51	50	58	46	50	46	36	36	44		16					
51—75												4	8	26	26	35	33	38	38	50	45	50	56	56	32		24					
76—100															4	4	8	8			4				4							
45. Nikol'skoye (o. Beringa) I																															
0					100	80	67	33	27																		7	27	60	80	100		
1—5						20	27	60	10	54	27	13				7						7	7	7			20	7	13			
6—10							6	6	20	27	13	13	7								7				13		13	7				
11—20									13	13	47	40	47	27	7	7	7	7	7	13		7	7	13	20		7	13				
21—30										6	7	27	27	20	20	7	14		13		7	7	13	13	7						
31—50											6		13	40	40	14	21	13	7	7	7	7	20			7	7				
51—75												7	6	7	6	40	40	36	14	58	65	27	33	33	33	33	7	13				
76—100														6	6	6	20	43	7	7	7	40	40	33	33	20	20	13	6			
101—125																								6	6	7						
47. Dolinovka																															
0			100		90	76	38	7	3																		11	49	85	100		
1—5					7	14	38	38	17	7																7	14	22	11			
6—10					3	10	10	7	17	10	3															7		11	4			
11—20							10	35	21	35	24	21	14	7	4				4							7	29	4				
21—30							4	10	28	34	35	24	17	14	10	14	10	7	7	4	7	10	3	7	3	18	7				
31—50								3	7	7	28	41	55	55	48	38	45	41	41	48	45	41	14	35	34	14	7				
51—75									4	7	10	14	14	17	24	34	28	31	31	28	28	28	31	17	35	14					
76—100														7	14	14	14	21	17	17	20	21	17		7						
101—125																	3			3											
52. Mil'kovo																															
0	100	96	86	52	30	4																				4	4	29	71	100		
1—5		4	9	39	31	29	12																				17	34	21			
6—10			5	9	9	12	17	8																			4		4			
11—20					26	17	17	25	8																		13	21	4			
21—30					1	25	33	25	29	25	8														4		4					
31—50						13	17	42	38	29	34	8	4												4	17	25	8				
51—75							1		25	42	25	50	75	58	54	33	25	25	17	17	17	21	17	50	25	8					
76—100											4	8	17	34	34	42	38	38	42	46	46	50	58	21	8						
101—125														4	8	17	29	29	41	33	29	25	17	8							
126—150															4	8	8	8		4	8	4									
54. Storozh, bukhta																															
0					100	80	57	27	15	12																	23	54	81	100		
1—5						12	35	46	31	8	12	12	8														12	19	12			
6—10						8	4	15	31	27	15	8	4										4	4	4		8					
11—20							1	12	19	34	34	19	8	19	12	8								4	4		19	4	1			
21—30									4	15	27	23	23	12	8		4	4							4		8	15				
31—50											8	30	45	42	50	46	27	27	28	20	16	15	19	50	4		4	4				
51—75										4	4	8	8	23	18	31	27	27	40	52	40	46	50	8	15		4					
76—100													4	4	12	15	42	42	28	8	28	19	12	19	11							
101—125																		4	4	16	12	12	15	7							
126—150																				4	4	4									
56. Sobolevo																															
0			100		91	62	12	19																			6	50	100			
1—5					6	32	51	6	6																	12	25	25				
6—10						6	25	19	31	6	6	6	6	6													6	12				
11—20							12	50	12	44	12																6	19	13			
21—30								6	50	38	38	19	19	13	6	12	6	12	6	12	6	6	6	19	6							

Depth (cm)	VIII	IX			X			XI			XII			I			II			III			IV			V			VI		
	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
31—50									12	12	38	56	50	50	50	32	25	25	25	31	12	19	12	19	19	32	44				
51—75											6	19	25	25	32	50	56	56	44	44	51	50	57	56	50	44						
76—100														6	6	6	13	13	19	19	25	25	25	19	12							
57. Pushchino																															
0		100	94	76	18	24																					6	18	59	100		
1—5			6	12	53	12	18																				12	6	17			
6—10				12	29	6		6																				6				
11—20						29	21	6																				6	12			
21—30						23	12	18	18																	6		12	12			
31—50						6	40	58	41	41	17															6	6	17				
51—75							6	6	29	35	53	35	18	6											12	6	23	29				
76—100							6	6	12	18	18	53	41	29	12	6				12	6					17	35	6				
101—125										6	12	6	23	41	47	44	31	25		12	12	24	29	35	35	53	18					
126—150												6	18	24	18	19	25	25		41	47	35	29	35	41	6					
151—200															23	31	38	44		35	35	41	42	30	12	6					
201—250																	6	6													
61. Ganaly																															
0		100	69	15	15																						50	72	100		
1—5			31	62	39	17	8																			22	22	7			
6—10				23	8	8	8																	7	7	14		14			
11—20					23	25		15																	7	29					
21—30						25	23	31	11		7	7	7				14		7	7	7	7	7	7	14	7	7	7				
31—50					15	17	46	23	50	50	43	43	29	29	14	21	7	22	14	14	14	21	36									
51—75						8	15	23	29	43	36	21	35	35	36	43	58	43	51	43	43	29	7	7	21							
76—100								8	7	7	7	29	29	29	29	29	21	14	14	7	22	29	22	21								
101—125											7			7	7	7	7	11	11	22	14	7	7									
126—150																				7												
69. Nachiki																															
0		100	90	34	14																						14	50	90	10	
1—5			10	59	24	10																				3	21	12	4		
6—10				3	21	10	10	3	3																	3	7	8			
11—20				3	24	17	17	14	3	7																3	7	8			
21—30					11	32	17	14	11	3			3													7	4	8			
31—50					3	24	35	21	29	22	21	10	3	7	3	3	3									13	21	18	4		
51—75						7	18	35	36	40	36	35	28	31	27	7	3	10	10	3	3	3	13	14	32	7	4				
76—100							3	10	11	25	29	31	32	24	23	40	40	33	33	27	24	30	30	37	7	18					
101—125									7		11	14	31	21	20	20	20	20	17	30	30	20	20	10	14						
126—150										3	3	10	3	14	7	13	11	24	17	13	13	30	20	20	7	4					
151—200														3	20	17	20	10	20	24	27	14	14	3							
201—250																		3	3	3			3	3	3						
251—300																					3	3									
77. Petropavlovsk, city I																															
0		100	94	82	71	29	12	12																		6	47	80	100		
1—5			6	18	23	47	23		6																	32	20	13			
6—10					6	12	35	12	12																6	19	20	7			
11—20						12	24	23	19	13	6														12	6	7				
21—30							6	18	6	12	6	6	6	12	12	6							6	18	18	6	6				
31—50								35	32	14	38	25	12	6	6	6	6	6	6				6	12	6	6					
51—75									19	25	31	41	63	35	35	35	41	29	29	23	35	35	31	25							
76—100									6	6	13	12	13	23	24	35	29	47	53	53	29	12	25								
101—125											6	13	6	18	18	12	18	12	6	12	12	23									
126—150														6	6	6	6				12										
151—200																		6	6	12											
78. Petropavlovsk, city II																															
0					100	91	18	37	18														9	36	55	73	100				
1—5							73	18	9	28												18	36	55	45	27					
6—10						9		36	55	27	9	9		9	9	9						9	9	9							

Depth (cm)	VIII	IX			X			XI			XII			I			II			III			IV			V			VI		
	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
11—20								9	9	18	9	37	9	9				9	9	9	18	18	18	37								
21—30											27	36	36	27	18		9	9	9	18	18	27	28								
31—50											9	18	37	55	46	64	36	27	27	18	18	37	27	9							
51—75													9	9	27	27	37	46	55	55	46	18									
76—100																	9	9													

84. Petropavlovsk, lighthouse II

0			100	95	52	19	14	19	5				5											14		30	55	100			
1—5				5	33	57	38	14	20	16	5			5									5	10	10	42	30	30				
6—10					10	19	10	29	20	26	5	5	5				10	10	10	5				10	5	5	15	5				
11—20					5	5	24	14	30	21	21	30	30	30			15	15	15	11	16	5	14	19	11	19	5	10				
21—30							9	14	5	16	32	25	20	30			20	20	20	21	32	35	38	19	10	10	15					
31—50							5	10	20	16	26	25	35	25			30	25	30	53	47	40	19	14	32	19	5					
51—75										5	11	15	5	10			15	25	25	10	5	20	21	24	10	5						
76—100																		5						5	5							
101—125																	10	5													

86. Ust'-Bol'sheretsk

0				100	73	44	21	6			3	3													9	15	77	100			
1—5					27	41	32	26	15	18	6		6	3					3	3		3	6	9	28	21	7					
6—10						9	15	15	18	12	12	18	16	13	18	18	9	12	9	9	9	15	13	7	14							
11—20						3	29	38	43	34	30	38	22	26	24	24	18	9	15	12	18	15	12	14	3							
21—30						3	3	15	18	21	28	25	22	23	12	15	24	30	30	27	15	25	19	10								
31—50									6	12	18	16	34	35	37	40	37	37	37	37	40	30	13									
51—75										3	3				9	3	9	9	6	9	9	3	6	3							
76—100																			3	3	3	3									

92. Lopatka, mys

0					100	76	21	21	3	4	4															11	29	67	93	100		
1—5						24	73	48	38	11	7	4														7	18	7				
6—10							3	17	14	28	18	4	12	4			4		4	4		7	7	7	7	11	7					
11—20								8	20	25	31	40	23	22	22	11	11	11	4	4	4	7	4	7	14							
21—30							3		14	14	11	19	19	22	15	15	11	4	4	4	11	7	11	7	7							
31—50								3	8	11	14	19	27	26	30	25	26	35	28	21	14	14	14	25	11	4						
51—75								3	3	7	11	7	15	11	11	26	22	24	35	28	28	29	28	18		7						
76—100											4	7	4	15	18	15	15	14	14	21	14	14	11	4	7							
101—125															4	4	4	4	4	11	21	14	17	7	7							
126—150																4	7	4			4	11	4	7								
151—200																		4	7	7	4	4	4									

TABLE 6

FREQUENCY (%) OF WINTERS WITH DIFFERENT GREATEST TEN-DAY DEPTH OF SNOW COVER ACCORDING TO PERMANENT ROD

No. Station	Station	Depth of snow cover (cm)																									Location of rod
		1—10	11—20	21—30	31—40	41—50	51—60	61—70	71—80	81—90	91—100	101—110	111—120	121—130	131—140	141—150	151—160	161—170	171—180	181—190	191—200	201—210	211—220	221—230	231—240	241—250	
1	Verkhne-Ponshino					18	18	35		17		12															Exposed
9	Apuka II				6	19	19	13	19		6	6	6			6											•
13	Ust'-Leonova	8	17	12	21	17	21	4																			•
17	Karaginskiy ostrov I										29	12	35	12	12												•
19	Ust'-Voyampolka		26	30	19	18	7																				•
21	Uka								11	6	28	33	16	6													•
26	Ust'-Khayryusovo		8	8	20	4	12	20	12	8	8																•
30	Klyuchi					3	3	3	7	10	18	11		10	7	3	15	7	3								Protected
34	Ust'-Kamchatsk								4	11	18	14	14	25	4	10											•
35	Afrika, mys			8	9	29	17	8	4	4	17		4														Exposed
36	Kozyrevsk			18	21	25	14	11	7	4																	•
38	Esso			4		35	22	9	26		4																•
45	Nikol'skoye (o. Beringa) I			7	7		14		22	22	14	7		7													•
47	Dolinovka			3	7	28	21	3	14	7	14	3															•
52	Mil'kovo							4	17	25	13	8	13	12		8											•
54	Storozh. bukhta					4	12	8	20	8	28	8		4	8												•
56	Sobolevo				13	6	12	19	25	19	6																•
57	Pushchino												6	13	13	6	12	6		13	25	6					•
61	Ganely					7	7	21	14	15	15	7		14													•
69	Nechiki									7	10	13	10	13	7	4	3	10	7	10	3					3	•
77	Petropavlovsk, city I						6		6	21	17	17	12	6			6		6								Protected
78	Petropavlovsk, city II				18	27		37	18																		Exposed
84	Petropavlovsk, lighthouse II			11	16	5	21	32	5			5	5														•
86	Ust'-Bol'sheretsk		16	22	19	22	9	9		3																	•
92	Lopatka, mys			4	11	7	11	7	15	11		15	4			7	4	4									•

TABLE 7

DATES OF APPEARANCE AND DISAPPEARANCE OF SNOW COVER AND THE FORMATION AND DESTRUCTION OF STABLE SNOW COVER

Station No.	Station	Number of days with snow cover	Date snow cover appeared			Date formed stable snow cover			Date destroyed stable snow cover			Date snow cover disappeared		
			average	early	late	average	early	late	average	early	late	average	early	late
1	Verkhne-Penshino	232	4 X	21 IX	20 X	12 X	1 X	4 XI	29 V	13 V	10 VI	30 V	13 V	12 VI
2	Slautnoye	222	7 X	19 IX	25 X	11 X	1 X	4 XI	11 V	2 IV	28 V	15 V	29 IV	28 V
4	Kamenskoye	210	16 X			18 X			10 V			15 V		
7	Chemurnaut	218	9 X			20 X			21 V			21 V		
8, 9	Apuka I, II	200	22 X	5 X	9 XI	8 XI	14 X	17 XII	21 V	IV	10 VI	22 V	8 V	10 VI
11	Topata-Olyutorskaya	221	16 X			28 X			1 VI			1 VI		
10	Tilichiki	199	23 X			30 X			16 V			16 V		
12	Korf	212	19 X	30 IX	22 XI	2 XI	18 X	1 XII	25 V	4 V	6 VI	26 V	8 V	6 VI
13	Ust'-Losnaya	206	14 X	27 IX	23 X	28 X	11 X	7 XII	9 V	18 IV	22 V	17 V	23 IV	30 V
14, 15	Ossora, Karaga	211	20 X	29 IX	18 XI	30 X	16 X	18 XI	27 V	14 V	7 VI	28 V	14 V	13 VI
16	Ust'-Palana	202	16 X			24 X			10 V			11 V		
17, 18	Karaginskiy ostrov I, II	202	29 X	30 IX	16 XI	7 XI	20 X	25 XI	24 V	6 V	10 VI	25 V	6 V	10 VI
19	Ust'-Voyampolka	201	17 X	26 IX	17 XI	27 X	9 X	17 XI	10 V	21 IV	23 V	14 V	26 IV	7 VI
21	Uka	222	20 X	4 X	8 XI	1 XI	16 X	18 XI	5 VI	3 V	19 VI	6 VI	20 V	19 VI
24	Tigil'	192	17 X			28 X			1 V			8 V		
24	Ozernoy, mys	213	30 X			9 XI			4 VI			5 VI		
25	Ptichiy ostrov	181	20 X			4 XI			24 IV			10 V		
26	Ust'-Khayryusovo	196	21 X	7 X	7 XI	1 XI	14 X	4 XII	11 V	25 IV	23 V	12 V	26 IV	26 V
30	Klyuchi	191	23 X	4 X	22 XI	6 XI	13 X	1 XII	9 V	31 III	25 V	15 V	25 IV	1 VI
32	Kozyrevskiy sovkhoz	196	22 X			30 X			15 V			19 V		
34	Ust'-Kamchatsk	194	30 X	2 X	27 XI	13 XI	20 X	15 XII	19 V	IV	31 V	20 V	1 V	3 VI
35	Afrika, mys	189	30 X			19 XI			22 V			23 V		
36	Kozyrevsk	183	23 X	4 X	17 XI	31 X	12 X	17 XI	27 IV	15 IV	16 V	5 V	18 IV	25 V
38	Esso	205	5 X	21 IX	20 X	21 X	8 X	4 XI	4 V	11 IV	16 V	19 V	4 V	9 VI
40	Icha	187	25 X	3 X	16 XI	4 XI	21 X	4 XII	4 V	31 III	19 V	8 V	24 IV	19 V
45	Nikol'skoye (o. Beringa) I	170	8 XI	11 X		26 XI	1 XI		8 V		31 V	9 V		31 V
46	Nikol'skoye (o. Beringa) II	151	5 XI			24 XI			26 IV			30 IV		
47	Dolinovka	188	20 X	30 IX	3 XI	30 X	14 X	24 XI	1 V	12 IV	16 V	7 V	24 IV	21 V
49	Kronotskoye ozero	195	16 X			6 XI			13 V			21 V		
50	Preobrazhenskoye (o. Mednyy)	169	5 XI	2 X	1 XII	25 XI	2 XI	28 XII	5 V	7 IV	30 V	7 V	7 IV	30 V

Station No.	Station	Number of days with snow cover	Date snow cover appeared			Date formed stable snow cover			Date destroyed stable snow cover			Date snow cover disappeared		
			average	early	late	average	early	late	average	early	late	average	early	late
51	Mil'kovo, exp. agr. sta.	197	21 X			28 X			13 V			17 V		
52	Mil'kovo	200	16 X			28 X			12 V			16 V		
54	Storosh, bukhta	173	2 XI			17 XI			7 V			10 V		
56	Sobolevo	193	22 X	4 X	8 XI	1 XI	13 X	6 XII	12 V	21 IV	26 V	15 V	21 IV	29 V
57	Pushchino	223	10 X			26 X			30 V			30 V		
59	Semlyachiki	193	3 XI	14 X	17 XI	14 XI	3 XI	2 XII	20 V	22 IV	7 VI	23 V	10 V	7 VI
61	Ganaly	208	15 X			24 X			14 V			20 V		
63	Kikhchik	184	1 XI	13 X	28 XI	8 XI	17 X	7 XII	6 V	31 III	29 V	8 V	10 IV	29 V
68	Yelizovo	174	26 X	4 X	15 XI	14 XI	24 X	8 XII	25 IV	9 IV	15 V	5 V	15 IV	26 V
69	Nachiki	226	17 X	2 X	6 XI	24 X	11 X	6 XI	4 VI	14 V	27 VI	4 VI	14 V	27 VI
70	Shipunskiy, mys	183	6 XI			23 XI			16 V			18 V		
71	Kamchatskaya agro	194	21 X			13 XI			14 V			17 V		
73	Nachikinskoye ozero	230	18 X			25 X			12 VI			12 VI		
77	Petropavlovsk, city I	194	30 X	9 X	27 XI	9 XI	22 X	8 XII	16 V	3 V	4 VI	18 V	3 V	1 VI
78	Petropavlovsk, city II	176	31 X			14 XI			1 V			6 V		
79	Apacha	202	15 X			29 X			15 V			21 V		
81	Bol'sheretskiy sovkhoz	186	30 X			10 XI			6 V			9 V		
83, 84	Petropavlovsk, lighthouse I, II	192	29 X	6 X	22 XI	13 XI	25 X	4 XII	16 V	15 IV	31 V	21 V	15 IV	31 V
86	Ust'-Bol'sheretsk	182	2 XI	17 X	27 XI	14 XI	29 X	4 XII	9 V	19 IV	22 V	11 V	24 IV	29 V
87	Povorotnyy, mys	190	12 XI			19 XI			27 V			27 V		
88	Khodutka	193	11 XI			16 XI			19 V			21 V		
89	Ozernaya I	174	8 XI	12 X	20 XI	18 XI	8 XI	31 XII	1 V	11 IV	19 V	7 V	20 IV	19 V
92	Lopatka, mys	176	11 XI	25 X	7 XII	24 XI	1 XI	7 XII	11 V	18 IV	8 VI	15 V	20 IV	8 VI

TABLE 9

GREATEST TEN-DAY DEPTH OF SNOW COVER (cm) WITH DIFFERENT PROBABILITY

Station No.	Station	Average height (cm)	Probability of ten-day Depths (%)						
			95	90	75	50	25	10	5
1	Verkhne-Penzhino	62	45	47	55	69	85	100	109
9	Apuka II	69	40	44	51	66	90	120	138
13	Ust'-Losnaya	36	8	13	23	38	51	58	61
14	Ossora	70	28	34	48	71	96	120	142
17	Karaginskiy ostrov I	111	93	95	102	112	121	134	145
19	Ust'-Voyampolka	31	15	17	21	29	41	49	56
21	Uka	101	78	84	95	102	111	119	123
26	Ust'-Khayryuzovo	56	20	25	39	58	73	89	96
30	Klyuchi	113	50	72	90	116	144	163	173
34	Ust'-Kamchatsk	112	80	87	98	113	128	141	150
35	Afrika, mys	61	30	36	45	57	78	102	111
36	Kozyrevsk	46	25	27	35	44	58	73	81
38	Esso	59	30	36	46	56	72	85	91
45	Nikol'skoye (o. Beringa) I	77	30	45	66	81	93	109	123
47	Dolinovka	63	30	37	47	58	80	99	109
52	Mil'kovo	101	70	75	83	95	116	138	150
54	Storozh, bukhta	86	50	57	71	86	103	122	134
56	Sobolevo	67	37	43	56	71	81	89	92
57	Pushchino	162	119	125	138	166	191	200	201
61	Ganaly	83	50	57	67	82	97	117	129
63	Kikhchik	50	26	30	38	49	61	70	75
68	Yelizovo	52	30	36	45	47	59	81	92
69	Nachiki	139	89	94	107	132	167	190	200
77	Petropavlovsk, city I	104	60	75	87	99	117	149	175
78	Petropavlovsk, city II	57	34	38	50	63	69	76	80
79	Apacha	92	66	70	82	95	105	112	118
84	Petropavlovsk, lighthouse II	58	26	30	43	59	77	98	111
86	Ust'-Bol'sheretsk	38	15	18	25	37	50	62	72
92	Lopatka, mys	82	29	35	54	79	117	148	162

TABLE 10
DATES OF FORMATION OF STABLE SNOW COVER WITH DIFFERENT PROBABILITY

No. Station	Station	Probability of formation on indicated dates and earlier (%)							Earliest
		95	90	75	50	25	10	5	
1	Verkhne-Penshino	29 X	24 X	17 X	11 X	5 X	2 X	30 IX	27 IX
4	Kamenskoye	5 XI	2 XI	24 X	16 X	10 X	8 X	8 X	7 X
8, 9	Apuka I, II	8 XII	3 XII	20 XI	7 XI	26 X	21 X	18 X	14 X
13	Ust'-Leseaya	21 XI	14 XI	3 XI	24 X	17 X	11 X	13 X	7 X
14, 15	Osora, Karaga	10 XI	8 XI	3 XI	29 X	24 X	17 X	13 X	6 X
17, 18	Karaginskiy ostrov I, II	30 XI	23 XI	15 XI	6 XI	30 X	24 X	20 X	10 X
19	Ust'-Voyampolka	12 XI	7 XI	31 X	28 X	23 X	17 X	13 X	1 X
21	Uka	19 XI	16 XI	9 XI	1 XI	26 X	22 X	18 X	11 X
26	Ust'-Khey-yuzovo	24 XI	17 XI	6 XI	29 X	22 X	19 X	15 X	9 X
30	Klyuchi	26 XI	21 XI	15 XI	6 XI	28 X	21 X	17 X	17 X
34	Ust'-Kamchatsk	8 XII	1 XII	19 XI	11 XI	4 XI	26 X	22 X	16 X
35	Afrika, mys	9 XII	4 XII	23 XI	16 XI	10 XI	2 XI	28 X	22 X
36	Kozyrevsk	11 XI	8 XI	3 XI	31 X	26 X	20 X	15 X	5 X
38	Esso	3 XI	31 X	25 X	20 X	16 X	12 X	11 X	5 X
40	Iche	23 XI	17 XI	8 XI	2 XI	28 X	24 X	21 X	18 X
47	Dolinovka	16 XI	10 XI	4 XI	30 X	23 X	17 X	14 X	8 X
50	Preobrashenskoye (o. Mednyy)	9 XII	7 XII	2 XII	23 XI	14 XI	10 XI	4 XI	28 X
52	Mil'kovo	16 XI	12 XI	6 XI	28 X	20 X	15 X	12 X	8 X
54	Storosh, bukhta	13 XII	8 XII	28 XI	18 XI	13 XI	6 XI	2 XI	31 X
56	Sobolevo	18 XI	12 XI	6 XI	31 X	25 X	20 X	17 X	10 X
59	Semlyachiki	30 XI	26 XI	19 XI	12 XI	8 XI	4 XI	1 XI	26 X
63	Kikhchik	28 XI	20 XI	12 XI	8 XI	3 XI	27 X	23 X	14 X
68	Yelizovo	3 XII	29 XI	21 XI	14 XI	6 XI	31 X	28 X	24 X
69	Nachiki	8 XI	6 XI	31 X	24 X	18 X	13 X	11 X	7 X
77	Petropavlovsk, city I	2 XII	27 XI	17 XI	8 XI	30 X	24 X	22 X	13 X
83, 84	Petropavlovsk, lighthouse I, II	7 XII	3 XII	22 XI	11 XI	4 XI	30 X	26 X	20 X
86	Ust'-Bol'sheretsk	6 XII	30 XI	22 XI	13 XI	5 XI	31 X	29 X	27 X
89	Osernaya I	14 XII	5 XII	21 XI	15 XI	12 XI	8 XI	1 XI	29 X
92	Lopatka, mys	8 XII	4 XII	29 XI	23 XI	16 XI	10 XI	7 XI	1 XI

TABLE 11

DATES OF DESTRUCTION OF STABLE SNOW COVER WITH DIFFERENT PROBABILITY

Station No.	Station	Probability of disruption on indicated dates and later (%)							Latest
		95	90	75	50	25	10	5	
1	Verkhne-Penzhino	17 V	20 V	25 V	28 V	3 VI	9 VI	11 VI	13 VI
4	Kamenskoye	2 V	4 V	7 V	14 V	22 V	30 V	2 VI	5 VI
8, 9	Apuka I, II	7 V	10 V	16 V	21 V	26 V	30 V	2 VI	10 VI
13	Ust'-Lesnaya	17 IV	22 IV	3 V	15 V	19 V	20 V	21 V	22 V
14, 15	Ossora, Karaga	14 V	17 V	22 V	29 V	3 VI	6 VI	7 VI	9 VI
17, 18	Karaginskiy ostrov I, II	9 V	13 V	20 V	26 V	29 V	4 VI	7 VI	12 VI
19	Ust'-Voyampolka	23 IV	26 IV	3 V	13 V	19 V	21 V	22 V	23 V
21	Uka	17 V	23 V	2 VI	8 VI	12 VI	15 VI	17 VI	19 VI
26	Ust'-Khayryuzovo	25 IV	28 IV	5 V	13 V	18 V	21 V	22 V	23 V
30	Klyuchi	23 IV	27 IV	4 V	11 V	16 V	20 V	23 V	26 V
34	Ust'-Kamchatsk	6 V	9 V	15 V	21 V	26 V	30 V	1 VI	2 VI
35	Afrika, mys	2 V	8 V	17 V	26 V	1 VI	3 VI	4 VI	5 VI
36	Kozyrevsk	15 IV	17 IV	20 IV	27 IV	3 V	10 V	13 V	17 V
38	Esso	18 IV	22 IV	30 IV	6 V	10 V	13 V	14 V	16 V
40	Icha	9 IV	19 IV	28 IV	5 V	12 V	17 V	18 V	20 V
47	Dolinovka I	15 IV	19 IV	27 IV	5 V	8 V	11 V	14 V	17 V
50	Preobrazhenskoye (o. Mednyy)	11 IV	16 IV	23 IV	3 V	15 V	24 V	28 V	1 VI
52	Mil'kovo	26 IV	30 IV	7 V	15 V	20 V	22 V	23 V	24 V
54	Storozh, bukhta	22 IV	25 IV	1 V	7 V	13 V	18 V	21 V	26 V
58	Sobolevo	27 IV	1 V	7 V	12 V	16 V	22 V	24 V	28 V
59	Semlyachiki	30 IV	6 V	15 V	21 V	26 V	1 VI	4 VI	8 VI
63	Kikhchik	7 IV	13 IV	25 IV	7 V	17 V	24 V	27 V	30 V
68	Yelizovo	8 IV	12 IV	18 IV	24 IV	29 IV	6 V	10 V	16 V
69	Nachiki	19 V	22 V	28 V	2 VI	10 VI	17 VI	20 VI	27 VI
77	Petropavlovsk, city I	5 V	7 V	12 V	17 V	23 V	30 V	3 VI	7 VI
84	Petropavlovsk, lighthouse I, II	22 IV	28 IV	9 V	20 V	27 V	30 V	31 V	1 VI
86	Ust'-Bol'sheretsk	19 IV	24 IV	3 V	10 V	16 V	19 V	21 V	22 V
89	Ozernaya I	17 IV	22 IV	30 IV	5 V	9 V	15 V	18 V	20 V
92	Lopatka, mys	19 IV	24 IV	3 V	11 V	21 V	30 V	3 VI	9 VI

ALPHABETICAL INDEX OF STATIONS

ALPHABETICAL INDEX OF STATIONS
SECTION 1. HUMIDITY OF THE AIR

Station No.	Station	Height (m)	1. Average monthly and annual variability of water vapor 3. Average monthly and annual relative humidity of air 7. Average monthly and annual insufficiency of saturation	2. Average monthly and annual variability of water vapor at different times of day
				Years of
79	Apacha	110	1947—60	
8, 9	Apuka I, II	4.2	1936—60	
35	Afrika, mys	13.5	1940—60	
81	Bol'sheretskiy sovkhoz	27	1947—59	1947—59
1	Verkhne-Penzhino	325.5	1944—60	1944—60
61	Ganaly	292	1950—60	
47	Dolinovka	100	1936—60	
68	Yelizovo	22	1941—64	
40	Icha	6.5	1936—52; 1954—60	
4	Kamenskoye	33.5	1952—60	
71	Kamchatskaya agro	10	1957—64	
17	Karaginskiy ostrov I	3	1937—57	1937—57
18	Karaginskiy ostrov II	2	1957—64	
63	Kikhchik	6	1936—49; 1951—60	
30	Klyuchi	26	1936—50	1936—60
36	Kozyrevsk	45	1936—60	
32	Kozyrevskiy sovkhoz	28	1940—55	
10, 12	Korf and Tilichiki	2	1936—60	1936—60
49	Kronotskoye ozero	378	1951—60	
92	Lopatka, mys	42	1936—60	1936—60
52	Mil'kovo	158	1941—60	1941—60
51	Mil'kovo, exp. agr. sta.	133	1936—57	
69	Nachiki	325.6	1936—42; 1944—60	1936—42; 1944—60
73	Nachikinskoye ozero	353.5	1939—56	
45, 46	Nikol'skoye (o. Beringa) I, II	19.4	1936—60	1936—60
89, 90	Ozernaya I, II	6	1936—60	
24	Ozernoy, mys	15	1954—60	
14	Ossora	3	1936—47; 1950—60	
76	Petropavlovsk	28	1949—55	
77, 78	Petropavlovsk, city I, II	32.2	1936—60	1936—60
83, 84	Petropavlovsk, lighthouse I, II	120	1936—60	1936—60
87	Povorotnyy, mys	18	1950—60	
50	Preobrazhenskoye (o. Mednyy)	3.7	1936—50; 1952—60	
25	Ptichiy ostrov	15	1950—60	
57	Pushchino	318	1949—60	
59	Semlyachiki	255	1936—60	
2	Slautnoye	44	1946—49; 1951—60	
56	Sobolevo	25	1937—60	
54	Storozh, bukhta	15	1939—60	
23	Tigil'	12	1949—60	1949—60
11	Topata-Olyutorskaya	12	1954—60	
21	Uka	2.9	1937—60	
86	Ust'-Bol'sheretsk	5.7	1936—60	1936—60
19	Ust'-Voyampolka	4.2	1936—38; 1940—60	
34	Ust'-Kamchatsk	6.4	1936—60	1936—60
13	Ust'-Lesnaya	2.7	1939—60	1939—60
16	Ust'-Palana	9	1949—60	
26	Ust'-Khayryuzovo	2.9	1936—60	1936—60
88	Khodutka	18	1953—60	
7	Chemurnaut	13.5	1951—60	
70	Shipunskiy, mys	108.6	1950—60	
38	Esso	481	1941—60	1941—60

4. Average monthly and annual relative humidity of air at different times of day	5. Number of days with relative humidity of air ≥30% during any observation periods and ≥80% at 1300	6. Recurrence of relative humidity of air at 1300 within different limits	8. Average monthly and annual insufficiency of saturation at different times of day
observations			
1947—60			
1936—60	1936—60	1936—60	
1940—60	1940—60	1940—60	
1947—59	1947—59		1947—59
1944—60	1944—60	1944—60	1944—60
1950—60			
1936—60			
1941—64			
1936—52; 1954—60	1936—52; 1954—60	1936—52; 1954—60	
1952—60	1952—60	1952—60	
1957—64			
1937—57	1937—57	1937—57	1937—57
1957—64			
1936—49; 1951—60			
1936—60	1936—60	1936—60	1936—60
1936—60			
1940—55			
1936—60	1936—60	1936—60	1936—60
1951—60			
1936—60	1936—60	1936—60	1936—60
1941—60	1941—60	1941—60	1941—60
1936—57			
1936—42; 1944—60	1936—42; 1944—60	1936—42; 1944—60	1936—42; 1944—60
1939—56			
1936—60	1936—60	1936—60	1936—60
1936—60			
1954—60			
1936—47; 1950—60			
1949—55			
1936—60	1936—60		1936—60
1936—60	1936—60	1936—60	1936—60
1950—60			
1936—50; 1952—60			
1950—60			
1949—60			
1936—60			
1946—49; 1951—60			
1937—60			
1939—60			
1949—60	1949—60	1949—60	1949—60
1954—60			
1937—60	1937—60	1937—60	
1936—60	1936—60	1936—60	1936—60
1936—38; 1940—60			
1936—60	1936—60	1936—60	1936—60
1939—60	1939—60	1939—60	1939—60
1949—60			
1936—60	1936—60	1936—60	1936—60
1953—60			
1951—60		1951—60	
1950—60			
1941—60	1941—60	1941—60	1941—60

SECTION 2. ATMOSPHERIC PRECIPITATION

Station No.	Station	Height (m)	1. Average amount of precipitation reduced to precipitation gauge readings	
			1a. Average amount of precipitation with corrections for precipitation gauge	
			XI—III[1]	IV—X
			Years of observations	
79	Apacha	110	1947—65	1947—65
9	Apuka II	4.2		1945—65
35	Afrika, mys	13.5		1940—65
28	Belogolovoye	20		1954—65
85	Bol'sheretsk	30	1959—65	1960—65
81	Bol'sheretskiy sovkhoz	27	1950—59	1950—59
31	Bol'shiye Shcheki	35		1956—65
53	Verkhne-Kamchatsk	50	1948—59; 1963—65	1948—59; 1963—65
1	Verkhne-Penzhino	325.5	1945—65	1945—65
61	Ganaly	292	1950—65	1950—65
74	Dalniy sovkhoz	20		1945—55; 1958—65
47	Dolinovka	100	1936—65	1936—65
68	Yelizovo	22	1936—64	1936—64
40	Icha	6.5	1935—65	1935—65
41	Icha, post	30		1949—65
4	Kamenskoye	33.5		1950—64
71	Kamchatskaya, agro	10	1957—65	1958—65
17, 18	Karaginskiy ostrov I, II	3		1927—28; 1935—65
63	Kikhchik	6	1930—32; 1935—65	1930—31; 1935—65
64	Kikhchik, post	28		1947—65
30	Klyuchi	26	1908—10; 1914—19; 1926—65	1909—10; 1914—19; 1926—29; 1931—65
36	Kozyrevsk	45	1928—30; 1935—65	1928—30; 1935—65
32	Kozyrevskiy sovkhoz	28	1940—55	1940—55
20	Korn	15		1954—64
12	Korf	2		1947—65
66	Koryaki	40		1953—65
49	Kronotskoye ozero	378	1951—65	1952—65
48	Krutogorovo	20		1948—65
92	Lopatka, mys	42		1935—65
65	Malka	245		1950—65
52	Mil'kovo	158	1941—65	1942—65
51	Mil'kovo, exp. agr. sta.	133	1935—57	1935—57
37	Moroshechnoye	20		1954—59
22	Napana	25		1953—65
6	Natal'ya	16.0	1963—65	1963—65
69	Nachiki	325.6	1936—65	1936—65
73	Nachikinskoye ozero	353.5	1939—55	1939—55
67	Nachikinskiy sovkhoz	295		1954—65
82	Nachilovo	15		1950—65
33	Nizhne-Kamchatsk	15	1948—64	1948—64
44	Nizhne-Oblukovino	10		1951—61
75	Nikolayevka	8		1957—65
45, 46	Nikol'skoye (o. Beringa) I, II	19.4		1935—65
89	Ozernaya I	6		1935—56

Station No.	Station	Height (m)	1. Average amount of precipitation reduced to precipitation gauge readings	
			1a. Average amount of precipitation with corrections for precipitation gauge readings	
			XI—III[1]	IV—X
	Years of observations			
90	Ozernaya II	36.5		1956—65
24	Ozernoy, mys	15	1954—65	1954—65
3	Oklan	40		1960—65
14, 15	Ossora, Karaga	3	1935—47; 1950—65	1935—47; 1950—65
80	Paratunka	35		1951—65
91	Pauzhetskiye Klyuchi	155	1958—65	1958—65
72	Perevesnyy	90		1953—65
77	Petropavlovsk, city I	7	1891—93; 1914—25; 1929—46	1891—93; 1914—24; 1929—46
78	Petropavlovsk, city II	32.2		1956—65
83, 84	Petropavlovsk, lighthouse I, II	120		1938—65
87	Povorotnyy, mys	18	1949—60	1950—60
25	Ptichiy ostrov	15		1950—65
50	Preobrazhenskoye (o. Mednyy)	3.7		1935—50; 1952—65
60	Provol'noye	30		1947—64
57	Pushchino	318	1949—65	1949—65
59	Semlyachiki	25.5		1936—65
2	Slautnoye	44	1952—65	1953—65
56	Sobolevo	25	1938—65	1939—65
58	Sobolevskiy sovkhoz	40		1954—64
39	Sredne-Kamchatsk	45		1952—65
54	Storozh, bukhta	15	1939—65	1939—65
5	Talovskiy sovkhoz	60		1960—65
23	Tigil'	12	1946—65	1946—65
10	Tilichiki	2.7	1929—33; 1936—46	1929—33; 1936—46
42	Tolbachik	60		1949—65
11	Topata-Olyutorskaya	12		1952—65
21	Uka	2.9	1936—65	1937—65
86	Ust'-Bol'sheretsk	5.7		1914—15; 1918; 1932—65
19	Ust'-Voyampolka	4.2	1936—65	1936—65
34	Ust'-Kamchatsk	6.4	1914—18; 1931—65	1914—18; 1932—65
13	Ust'-Lesnaya	2.7	1959—65	1939—65
16	Ust'-Palana	9	1951—62	1950—61
26	Ust'-Khayryuzovo	2.9	1932—65	1932—65
27	Khayryuzovo	85		1955—65
29	Kharchino	25		1948—55
88	Khodutka	18	1953—65	1953—65
7	Chemurnaut	13.5		1950—65
55	Sharomy	195		1950—58
62	Shakhty	145		1950—58
70	Shipunskiy, mys	108.6		1952—65
43	Shchapino	90	1947—65	1947—65
38	Esso	481	1941—65	1941—65

[1] The years of the observations for the period XI-III are not provided for the stations at which the total precipitation in Tables 1, 1a were obtained based on the ratio of the precipitation during the cold and hot period of the adjacent stations.

Station No.	Station	Height (m)	2. Solid, liquid and mixed precipitation in % of total amount 9. Number of days with solid, liquid and mixed precipitation	3. Greatest and smallest monthly and annual amount of precipitation with different probability
				Years of
9	Apuka I, II	4.2	—	1945 - 65
35	Afrika, mys	13.5	1939—54; 1959 - 60	—
81, 85	Bol'sheretskiy sovkhoz and Bol'sheretsk	30		—
1	Verkhne-Penzhino	325.5	1945—60	1945—65
61	Ganaly	292	—	-
47	Dolinovka	100	—	1936—65
68	Yelizovo	22	—	1936—64
40	Icha	6.5	1936—60	—
4	Kamenskoye	33.5	1950—60	
17, 18	Karaginskiy ostrov I, II	3	1936—60	—
30	Klyuchi	26	1914—19; 1926—60	1908—10; 1914—19; 1926—65
36	Kozyrevsk	45	—	—
12	Korf	2	1947—60	—
92	Lopatka, mys	42	1936 - 60	—
52	Mil'kovo	158	1941—60	—
51	Mil'kovo, exp. agr. sta.	133	—	—
69	Nachiki	325.6	1936—60	—
45, 46	Nikol'skoye (o. Beringa) I, II	19.4	1936—60	—
89, 90	Ozernaya I, II	6	—	1935—56
14, 15	Ossora and Karaga	3		1935—47; 1950—65
77, 78	Petropavlovsk, city I, II	7	1936—46	1891—93; 1914—25; 1929—46
83, 84	Petropavlovsk, lighthouse I, II	120	1936 - 60	—
50	Preobrazhenskoye (o. Mednyy)	3.7	1936—50; 1952 - 60	—
57	Pushchino	318		—
59	Semlyachiki	25.5	—	—
56	Sobolevo	25	—	1939—65
54	Storozh, bukhta	15		—
23	Tigil'	12	1949—60	—
21	Uka	29	1936 - 60	1936—65
86	Ust'-Bol'sheretsk	5.7	1936—60	1914—15; 1917—19; 1932—65
19	Ust'-voyampolka	4.2	—	1936 - 65

5. Daily maximum precipitation with different probability. Year 6. Daily maximum precipitation with different probability by month	7. Maximum intensity of precipitation for different time periods. Year	8. Number of days with different amount of precipitation		8a. Number of days with traces of precipitation	10. Average and maximum duration of precipitation
		XI—III	IV—X		
observations					
1929–33; 1936—65 1, *	1956—61	1953—65	1945—65	1945—60	1940—60
—	—	—	—	1939—54; 1959—60	—
—	1956 62	—	—	—	—
1945—65¹	—	1945 65	1945—65	1945—60	1945—61
—	—	—		—	1950—63
1936–65	—	1936–65	1936—65	—	—
1936–64	1951–59; 1962	1936 - 64	1936—64	—	—
—	—	1935—65	1935—65	1936—60	—
—	1953—60	1949—64	1950—64	1950—60	—
—	1959 62	1927—28; 1935–55	1927—28; 1935—65	1936—60	1940—41; 1948—63
1908—10; 1914—19; 1926 65	1942—43; 1952—62	1908—10; 1914—19; 1926—28; 1930—65	1909—10; 1915–19; 1926—28; 1931—65	1914—19; 1926—60	
1928—30; 1935 65	1941 49; 1952; 1955—62	—	—	—	1940—60
—	1952; 1954—55; 1957—62	1951—65	1947—65	1947—60	—
1935—65*	—	1952 65	1935 - 65	1936—60	1940—60
1935 65¹		1941—65	1942–65	1941—60	1941—60
—	1939—40; 1942	—	—	—	—
1936—65	1945; 1949; 1951—52; 1954–62	1936—65	1935—65	1936—60	—
—	1955—62	1951—65	1936—65	1936—60	—
1935—56	1953–57; 1959—62	—	—	—	—
—	—	—	—	—	—
1891—93; 1914—25; 1929—46	1936—49; 1951 62	1891 93; 1914 - 25; 1929—46	1891—93; 1914—25 1929—45	1936—46	1940—60
1901—1965*	—	1951—65	1901—04; 1906—19; 1929—37; 1936 65	1936—60	—
1935—50; 1952—65	—	1935—50; 1952—65	1935—50; 1952—65	1936—50; 1952—60	
—	1957—59	—	—	—	—
—	1937; 1941—49; 1953–54; 1956; 1958—62		—	—	—
1938–65	1956—62	1938—65	1939—65	—	—
—	—	1939—65	1939—65	—	—
—	1956—57; 1959—62	1946–65	1946—65	1949—60	—
1937—65*	1953 62	1937—65	1937—65	1936—60	—
1914–15; 1918*; 1932–65	—	1952–65	1914—15; 1918; 1932—65	1936—60	1940—60
1936–65*	—	1949—65	1936—65	—	—

Station No.	Station	Height (m)	2. Solid, liquid and mixed precipitation in % of total amount 9. Number of days with solid, liquid and mixed precipitation	3. Greatest and smallest monthly and annual amount of precipitation with different probability
34	Ust'-Kamchatsk.	6.4	1936—60	1914—18; 1931—65
13	Ust'-Lesnaya	2.7	1939—60	—
26	Ust'-Khayryuzovo	2.9	1936—60	1932—65
7	Chemurnaut	13.5	1950—60	—
38	Esso	481	1941—60	—

5. Daily maximum precipitation with different probability. Year 6. Daily maximum precipitation with different probability by month	7. Maximum intensity of precipitation for different time periods. Year	8. Number of days with different amount of precipitation		8a. Number of days with traces of precipitation	10. Average and maximum duration of precipitation
		XI—III	IV—X		
1914—18; 1931—65	1939—41; 1945—49; 1954—57; 1959—62	1915—17; 1932—65	1915—17; 1932—65	1936—60	1939—60
—	—	—	—	1939—60	—
1932—33; 1935—65*	—	1951—65	1932—33; 1935—65	1936—60	1941; 1943—60
—	—	1950—65	1950—65	1950—60	—
1941—65	1958—62	1941—65	1941—65	1941—60	1943—60

NOTES: 1. The periods covering the years of observations of several stations combined by the "station-annual" method are given in Table 6 for Apuka, Verkhne-Penzhino and Mil'kovo, and in Table 5 for Verkhne-Penzhino and Mil'kovo: Apuka (1929-65), Tilichiki (1929-33, 1936-46) and Korf (1947-65), Verkhne-Penzhino (1945-65) and Slautnoye (1945-49, 1941-65), Mil'kovo exp. agr. sta. (1935-43).

2. The asterisk (*) in the columns for Tables 5 and 6 indicates that only data for the second characteristic are given.

SECTION 3. SNOW COVER

Station No.	Station	Height (m)	1. Average ten-day height of snow cover according to permanent rod	5. Recurrence of different heights of snow cover in ten-day periods according to permanent rod 8. Recurrence of winters with different greatest ten-day snow cover according to permanent rod 9. Greatest ten-day heights of snow cover with different probability	7. Dates of appearance and disappearance of snow cover, formation and destruction of stable snow cover 10. Dates of formation of stable snow cover with different probability 11. Dates of destruction of stable snow cover with different probability
			Years of observations		
79	Apacha	110	1947—65	1947—65*	1947—65*
8	Apuka I	5	—	—	1935—45
9	Apuka II	4.2	1945—46; 1948—52; 1954—65	1945—46; 1948—52; 1954—65	1945—52; 1954—65
35	Afrika, mys	13.5	1939—64	1939—54	1939—61
81	Bol'sheretskiy sovkhoz	2.7	1931—36; 1947—59	—	1931—36; 1947—65*
1	Verkhne-Penzhino	325.5	1945—50; 1951—53; 1954—62; 1963—65	1945—50; 1951—53; 1954—62; 1963—65	1944—50; 1951—65
61	Ganaly	292	1950—59; 1960—65	1950—59; 1960—65	1950—65*
47	Dolinovka	100	1936—65 o; 1950—65 з	1936—65	1936—65
68	Yelizovo	22	1947—64	1947—64*	1936—39; 1940—42; 1943—51
40	Icha	6.5	1935—42 з; 1958—65 о	—	1934—48; 1950—65
4	Kamenskoye	33.5	1955—64	—	1950—65
71	Kamchatskaya agro	10	1957—65	—	1957—65*
15	Karaga	17	1935—46	—	1935—45; 1947
17	Karaginskiy ostrov I	3	1935—44; 1946—47; 1951—57	1935—44; 1946—47; 1951—57	1927—29; 1931; 1932—33, 1935—44; 1946—48; 1951—57
18	Karaginskiy ostrov II	2	—	—	1957—65
63	Kikhchik	6	1935—42 з; 1942—65 о	1942—65*	1935—65
30	Klyuchi	26	1931—65	1931—65	1914—19; 1926—29; 1930—65
36	Koryaksk	45	1935—44; 1945—46; 1947—59; 1961—65	1935—44; 1945—46; 1947—59; 1961—65	1928—30; 1935—65
32	Koryakskiy sovkhoz	28	1940—55	—	1940—55*
12	Korf	2	1947—56 з; 1956—59; 1961—65 о	—	1947—65*
49	Kronotskoye ozero	378	1951—65	—	1951—52; 1953—65*
92	Lopatka, mys	42	1935—39; 1940—65	1935—39; 1940—65	1927—29; 1935—65
52	Mil'kovo	158	1941—65	1941—65	1942—65
51	Mil'kovo, exp. agr. sta.	133	1935—57	—	1935—56*

69	Nachiki	325.6	1936—65	—	1936—65
73	Nachikinskoye ozero	353.5	1947—56	—	1939—56*
45	Nikol'skoye (o. Beringa) I	19.4	1930—33; 1934—41; 1942—48	1930—33; 1934—41; 1942—48	1914—18; 1921—48; 1951—57*
46	Nikol'skoye (o. Beringa) II	14.2	1957—65	—	1957—65*
89	Osernaya I	6	1935—39; 1941—56	—	1915—17; 1930—32; 1941—56
90	Osernaya II	36.5	1956—65	—	—
24	Osernoy, mys	15	1954—65	—	1954—65*
14	Ossora	3	1950—51; 1953—65	1950—51; 1953—65*	1950; 1952—55
91	Paushetskiye klyuchi	155	1958—59; 1960—65	—	—
77	Petropavlovsk, city I	7	1929—46	1929—46	1914—22; 1923—21; 1929—45
78	Petropavlovsk, city II	32,2	1951—63	1951—63	1946—65*
83	Petropavlovsk, lighthouse I	94	1892—93; 1900—05; 1907—09; 1923; 1927—33; 1935—38	—	1914—28
84	Petropavlovsk, lighthouse II	120	1940—48; 1949—57; 1960—65	1940—48; 1949—57; 1960—65	1938—65
87	Povorotnyy, mys	18	1949—50	—	1949—60*
50	Preobrashenskoye (o. Mednyy)	3.7	1901—02; 1903—04; 1934—42; 1943—46; 1947—49; 1953—65	—	1916—17; 1929—30; 1941—59; 1953—54; 1956—65
25	Ptichiy ostrov	15	1954—58; 1960—65	—	1954—59; 1960—65*
57	Pushchino	318	1948—65	1948—65	1918—65*
59	Semlyachiki	25.5	1935—38; 1939—45; 1946—48; 1949—59; 1961—65	—	1935—65
2	Slautnoye	44	1944—50; 1951—65	—	1944; 1946—49; 1951—65*
56	Sobolevo	25	1937; 1938—48 a; 1949—65 o	1949—65	1937—65
54	Storozh, bukhta	15	1939—65	1939—65	1939—65
23	Tigil'	12	1949—65	—	1919—65*
10	Tilichiki	27	1930—33; 1935—42	—	1929—34; 1936—49*
11	Topata-Olyutorskaya	12	1952—65	—	1952—65*
21	Uka	2.9	1945—64	1945—64	1936—65
86	Ust'-Bol'sheretsk	5.7	1914—15; 1932—65	1914—15; 1932—65	1914—15; 1918; 1932—65
79	Ust'-Voyampolka	4.2	1935—65	1935—65	1935—65
81	Ust'-Kamchatsk	6.4	1931—32; 1934—65	1931—32; 1934—65	1914—18; 1931—32; 1934—65
82	Ust'-Lesnaya	2.7	1939—42; 1943—65	1939—42; 1943—65	1939—65
16	Ust'-Palana	9	1942—62	—	1942—44; 1949—62*
26	Ust'-Khayryuzovo	2.9	1932—35; 1936—43; 1944—65	1932—35; 1936—43; 1944—65	1932—34; 1935—65
88	Khodutka	18	1957—65	—	1953—65*
7	Chemurnaut	13.5	1950—65	—	1950—65*
70	Shipunskiy, mys	108.6	1951—60; 1961—64	—	1950—60; 1961—65*
38	Esso	481	1941—65	1941—65	1941—65

NOTES: 1. The letter in the column for Table 1 indicates that the period was taken for the protected section, and - exposed.

2. The asterisk (*) in the columns for Tables 5, 6 and 9 indicates the presence of data for only the third characteristic, and for Tables 7, 10 and 11 - only the first.

3. The data for the Bol'sheretskiy sovkhoz and Bol'sheretsk stations are combined in Table 7 because the row is uniform for this characteristic.

Station No.	Station	Depth (m)	2. Depth of snow cover according to snow surveys made on last day of ten-day period			3. Density of snow cover according to snow surveys made on last day of ten-day period 4. Amount of water in snow cover according to snow surveys made on last day of ten-day period		
			field	glade in woods	in woods under trees	field	glade in woods	in woods under trees
			Years of observations					
79	Apacha	110	1947—65	—	—	1947—65	—	—
8, 9	Apuka I, II	4.2	1940—45; 1947—49; 1950—51; 1954—56; 1960; 1963—65;	—	—	—	—	—
35	Afrika, mys	13.5	1942—58; 1960—65	—	—	1946—48; 1949—57; 1960—65	—	—
81	Bol'sheretskiy sovkhoz	2.7	1947—59	—	—	1947—59	—	—
1	Verkhne-Penshino	325.5	1955—62; 1963—65	—	—	1955—62; 1963—65	—	—
61	Gamaly	292	—	1950—51; 1952—65	1952—61; 1963—65	—	1950—51; 1952—65	1952—61; 1963—65
47	Dolinovka	100	1937—48; 1949—65	1950—55; 1960—65	—	1946—48; 1949—65	1950—55; 1960—65	—
68	Yelizovo	22	1945—64	—	—	1948—64	—	—
40	Icha	6.5						
4	Kamenskoye	33.5	1952—65	—	—	1952—65	—	—
63	Kikhchik	6	1938—46; 1949—65	—	—	1945—46; 1949—65	—	—
30	Klyuchi	26	1936—37; 1940—65	—	—	1945—65	—	—
46	Kozyrevsk	45	1937—41; 1942—65	—	1951—65	1945—65	—	1951—65
32	Kozyrevskiy sovkhoz	28	1940—47; 1949—55	—	—	1945—47; 1949—55	—	—
12	Korf	2	1949—59; 1961—65	—	—	1949—59; 1961—65	—	—
49	Kronotskoye ozero	378	1951—65	—	—	1951—65	—	—
92	Lopatka, mys	42	1937—41; 1942—48; 1949—54; 1956—65	—	—	1949—51; 1952—54; 1956—65	—	—
52	Mil'kovo	158	1942—65	—	1950—65	1950—65	—	1950—65
51	Mil'kovo, exp. agr. sta.	133	1937—57	—	—	1937—41; 1946—57	—	—
69	Nachiki	325.6	1938—43; 1945—65	—	—	1941—43; 1946—65	—	—
73	Nachikinskoye ozero	353.5	1940—56	—	1942; 1948—49; 1952—56	1948—56	—	—
45, 45	Nikol'skoye (o. Beringa) I, II	19.4	1936—44; 1945—48; 1952—62; 1963—65	—	—	1945—48; 1955—62; 1964—65	—	—
89, 90	Ozernaya I, II	6	1937—48; 1951—65	—	—	1951—65	—	—
14, 15	Ossora and Karaga	3	1936—37; 1939—46; 1950—51; 1952—65	—	—	1945—46; 1950—51; 1952—65	—	—
78	Petropavlovsk, city II	32.2	1946—54; 1955—59	—	—	1946—54; 1955—59	—	—
84	Petropavlovsk, lighthouse II	120	1946—55; 1958—65	—	—	1946—55; 1958; 1959—65	—	—
57	Pushchino	319	1956—60	—	—	1956—60	—	—
59	Semlyachiki	25.5	1938—50; 1952—55	—	—	1945—50; 1952—55	—	—
2	Slautnoye	44	1952—65	—	—	1956—65	—	—
56	Sobolevo	25	1940—41; 1943—65	—	1942—43; 1946—48; 1950—64	1940—41; 1943—65	—	1946—48; 1950—64
54	Storozh, bukhta	15	1940—51; 1953—55	—	1940—44; 1945, 1955—65	1945—51; 1953—55	—	1955—65
23	Tigil'	12	1946—65	—	—	1946—65	—	—

Station No.	Station	Depth (m)	2. Depth of snow cover according to snow surveys made on last day of ten-day period			3. Density of snow cover according to snow surveys made on last day of ten-day period 4. Amount of water in snow cover according to snow surveys made on last day of ten-day period		
			field	glade in woods	in woods under trees	field	glade in woods	in woods under trees
			Years of observations					
11	Topata-Olyutorskaya	12	1952—65	—	—	1952—58; 1959—65	—	—
21	Uka	2.9	1937—65	—	—	1946—65	—	—
86	Ust'-Bol'sheretsk	5.7	1936—37; 1940—41; 1944—45; 1946—60	—	—	1947—60	—	—
19	Ust'-Voyampolka	4.2	1936—42; 1944—51; 1953—65	—	—	1937—40; 1941—42; 1944—51; 1953—65	—	—
44	Ust'-Kamchatsk	6.4	1936—65	—	—	1945—65	—	—
13	Ust'-Lesnaya	2.7	1939—42; 1943—51; 1952—64	—	—	1946; 1948—49; 1950—51; 1952—58; 1961—64	—	—
26	Ust'-Khayryuzovo	2.9	1936—46; 1947—65	—	—	1947—48; 1950—65	—	—
88	Khodutka	18	1953—55; 1956—65	—	—	1953—55; 1956—65	—	—
7	Chemurnaut	13.5	1950—65	—	—	1950—55; 1956—57, 1961—65	—	—
70	Shipunskiy, mys	108.6	1950—51; 1955—60	—	—	1950—51; 1955—60	—	—
38	Esso	481	1941—45; 1946—65	—	—	1946—51; 1954—65	—	—

DISTRIBUTION LIST

DISTRIBUTION DIRECT TO RECIPIENT

ORGANIZATION	MICROFICHE
A205 DMAHTC	1
C509 BALLISTIC RES LAB	1
C510 R&T LABS/AVEADCOM	1
C513 ARRADCOM	1
C535 AVRADCOM/TSARCOM	1
C539 TRASANA	1
C591 FSTC	4
C619 MIA REDSTONE	1
D008 MISC	1
E053 HQ USAF/INET	1
E404 AEDC/DOF	1
E408 AFWL	1
E410 AD/IND	1
F429 SD/IND	1
P005 DOE/ISA/DDI	1
P050 CIA/OCR/ADD/SD	2
AFIT/LDE	1
NOIC/OIC-9	1
CCV	1
MIA/PHS	1
LLYL/CODE L-309	1
NASA/NST-44	1
NSA/T513/TDL	2
ASD/FTD/TQIA	1
FSL	1